GB

1/2.8” Network Full HD Speed Dome, PTZ, 18x, Day&Night

PXD-2018PTZ1080

eneo®

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Part 1

Installation Guide

Version 1.2

Preface

Information given in this manual was current when published. The company reserves the right to revise and improve its products. All specifications are subject to change without notice.

Notice

This manual provides installation information for the outdoor Integrated High Speed Dome Camera. To work with the Dome Cameras, any installer or technician must have the following minimum qualifications:

- A basic knowledge of CCTV systems and components
- A basic knowledge of electrical wiring and low-voltage electrical hookups
- A basic knowledge of network system setting
- Have read this manual completely

Copyright

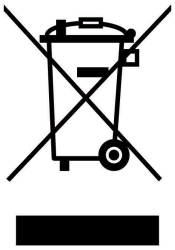
Under copyright laws, the contents of this installation guide may not be copied, photocopied, translated, reproduced or reduced to any electronic medium or machine-readable format, in whole or in part, without prior written permission of the company.

Important Information

Before proceeding, please read and observe all instructions and warnings in this manual. Retain this manual with the original bill of sale for future reference and, if necessary, warranty service. When unpacking your unit, check for missing or damaged items. If any item is missing, or if damage is evident, DO NOT INSTALL OR OPERATE THIS PRODUCT. Contact your dealer for assistance.

Regulation

CE	This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

	This symbol on the product or on its packaging indicates that this product shall not be treated as household waste in accordance with Directive 2002/96/EC. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By proper waste handling of this product you ensure that it has no negative consequences for the environment and human health, which could otherwise be caused if this product is thrown into the garbage bin. The recycling of materials will help to conserve natural resources. For more details information about recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

	Compliance is evidenced by written declaration from our suppliers, assuring that any potential trace contamination levels of restricted substances are below the maximum level set by EU Directive 2002/95/EC, or are exempted due to their application.

Safety Instructions

- Read these safety instructions and the operation manual first before you install and commission the camera.
- Keep the manual in a safe place for later reference.
- Protect your camera from contamination with water and humidity to prevent it from permanent damage. Never switch the camera on when it gets wet. Have it checked at an authorized service center in this case.
- Never operate the camera outside of the specifications as this may prevent the camera functioning.
- Do not operate the cameras beyond their specified temperature, humidity or power ratings.
- Operate the camera only at a temperature range of -40°C to +50°C and at a humidity of max. 90%.
- To disconnect the power cord of the unit, pull it out by the plug. Never pull the cord itself.
- Pay attention when laying the connection cable and observe that the cable is not subject to heavy loads, kinks, or damage and no moisture can get in.
- Do not attempt to disassemble the camera board from the dome.
- The warranty becomes void if repairs are undertaken by unauthorized persons. Do not open the camera housing.
- Never point the camera towards the sun with the aperture open. This can destroy the sensor.
- Installation, maintenance and repair have to be carried out only by authorized service centers. Before opening the cover disconnect the unit from mains input.
- Contact your local dealer in case of malfunction.
- Only use original parts and original accessories.
- Do not use strong or abrasive detergents when cleaning the dome. Use a dry cloth to clean the dome surface.In case the dirt is hard to remove, use a mild detergent and wipe gently.
- All openings provided in the housing for assembly purposes must be closed and/or sealed.
- **The installer is responsible for ensuring that the degree of protection as per the technical specifications is upheld, e.g. by using all enclosed gasket seals and O-rings, by waterproofing the cable exits with silicon or through laying the cable in such a way that the cable does not act as a „gutter”.**
- **During assembly, care must be taken to ensure that existing seals are correctly inserted and are not displaced as a result of assembly.**

  You must not continue to use damaged seals.

NOTE:

This is a class A digital device. This digital device can cause harmful interference in a residential area; in this case the user may be required to take appropriate corrective action at his/her own expense.

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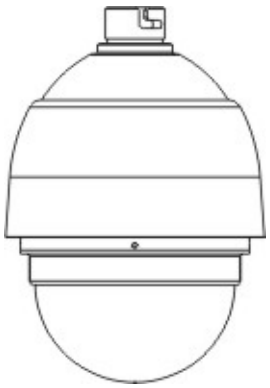
1. Introduction

The Full HD Speed Dome IP Camera is designed to deliver superb performance and durability with an intelligent and stylish housing that is suitable in any security and surveillance installation.

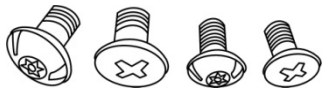
2. Standard Package Contents

Before proceeding, please check the box contains the items listed here. If any item is missing or has defects, DO NOT install or operate the product and contact your dealer for assistance.

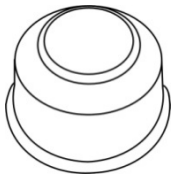
Outdoor Model



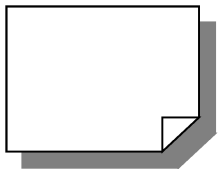
Camera Body with
Outdoor Mount Kit



M3 Standard Screw (x1)
M3 Security Screw (x1)*
M5 Standard Screw (x1)
M5 Security Screw (x1)*

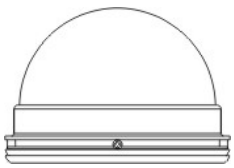


Waterproof Rubber

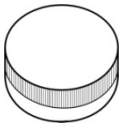


Quick Guide

CD: Operation Manuals



Optical Cover



Lubricant

Security Torx*

*Optional: For Vandal Proof Cover only.

3. Camera Cable Connections

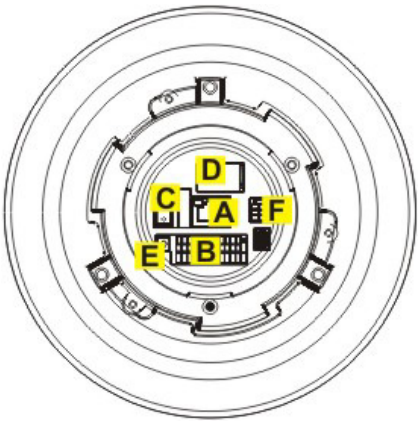
Before installing or connecting the Dome Camera, please refer to this section and complete preparations for dome setups and various switch settings.

There will be a PE cloth sheet covered inside the dome cover and a lens cap on the lens for shipping protection. Follow the steps below to remove those protective materials.

Step 1: Unpack the dome package and take out the dome body.
Step 2: Rotate and remove the protective cover.
Step 3: Remove the PE cloth sheet and take off the lens cap.
Step 4: Attach the dome cover to the dome body.

3.1 Switch/Connector Definition

There are various connectors located on the Dome Camera's back plate as shown in the figures below. Please refer to the diagrams and tables accompanied with for use of each switch/connector.



Outdoor

A	RJ-45 Connector
B	ALARM I/O
C	Power
D	Micro SD Card Slot
E	Factory Reset Button
F	Audio I/O

NOTE: DO NOT change the network Speed Dome Camera's Communication Switch factory default settings.

3.2 Cable Requirements

For operation, the network Speed Dome IP Camera require power cable and RJ-45 as described below:

3.2.1 Power Connection

Please refer to the illustrations below to connect power core through the supplied power adaptor.

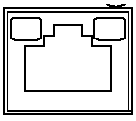
Pin	Definition
1	AC 24-
2	FG
3	AC 24+

3.2.2 Ethernet Cable Connection

Use of Category 5 Ethernet cable is recommended for network connection; to have best transmission quality, cable length shall not exceed 100 meters. Connect one end of the Ethernet cable to the RJ-45 connector of the network Speed Dome Camera, and the other end of the cable to the network switch or PC.

NOTE: In some cases, you may need use an Ethernet crossover cable when connecting the network Speed Dome Camera directly to the PC.

Check the status of the link indicator and activity indicator LEDs; if the LEDs are unlit, please check LAN connection.

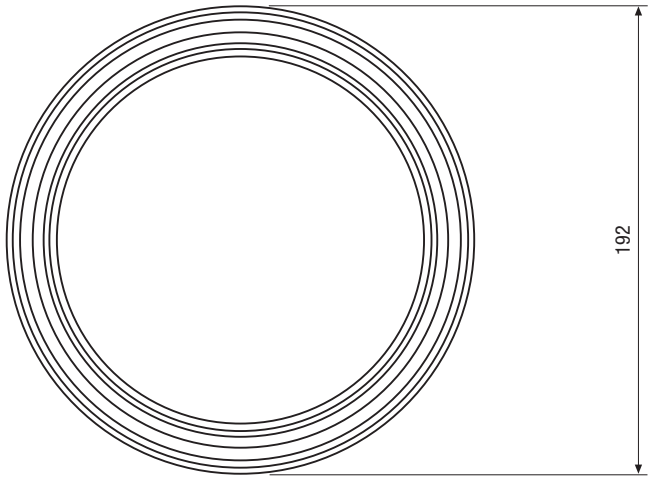


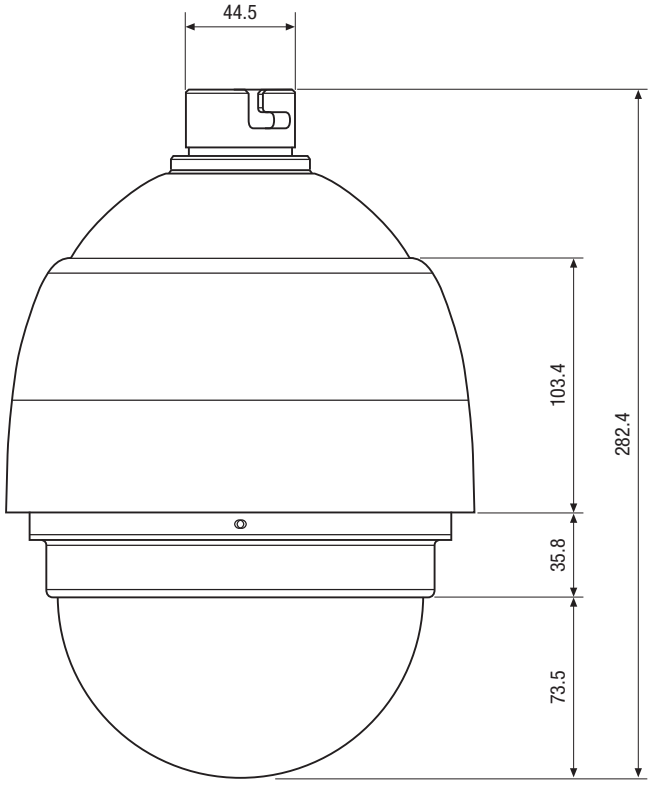
Green Link Light indicates good network connection.
Orange Activity Light flashes for network activity indication.

4. Dome Camera Installation

Basing on user's installation environments, the Dome Camera can be installed on ceiling, on wall or on pole. In the following section, various Dome Camera's installation accessories, installation methods and installation procedures will be described in detail. In addition, the next section will provide the Dome Camera's dimensions for your reference before installation.

4.1 Camera Dimensions

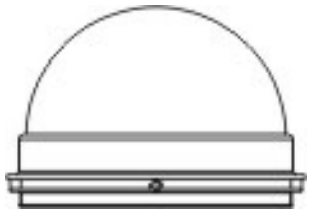




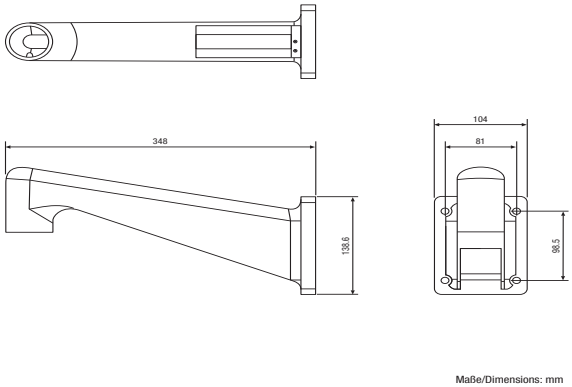
Dimensions: mm

4.2 Optional Accessories

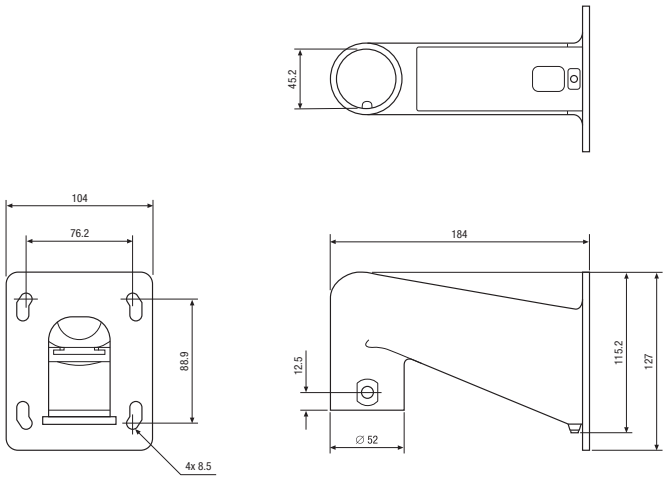
Dome Camera Accessories

Transparent/Vandal Proof
 Transparent Cover (Standard) Vandal Proof Cover (Optional)

Mounting Accessories

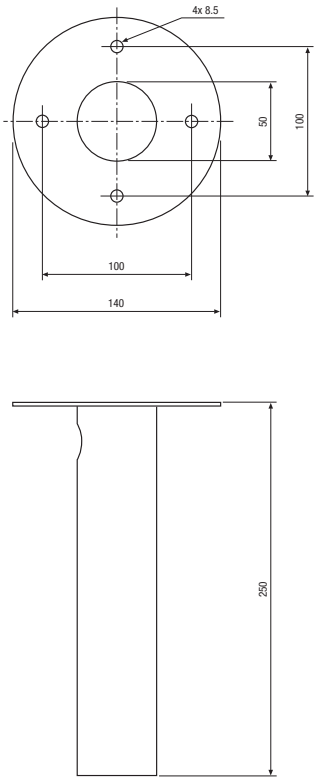
Standard Pendent Mount (Art. No. 200825) White; 348×104×138.6 mm (13.7×4.1×5.5 inches); 1.5 kg (3.3 lbs); Diameter: 45 mm (1.8 inches). Supplied with M8x12 screw x1, spring washer-8 x1, pendent tube washer x1, rubber washer-8 x1 and sponge x2.	
	 Dimensions: mm

Compact Pendent Mount (Art. No. 200826)
184×104×127 mm (7.24×4.09×5 inches); 0.6 kg (1.2 lbs)
Supplied with rubber washer-8 x1, pendent tube washer x1, spring washer-8 x1 and M8x12 screw x1.



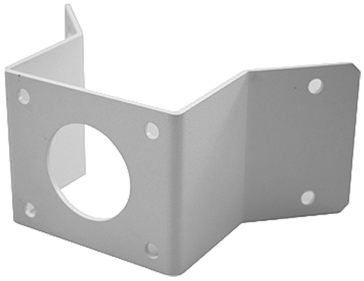
Dimensions: mm

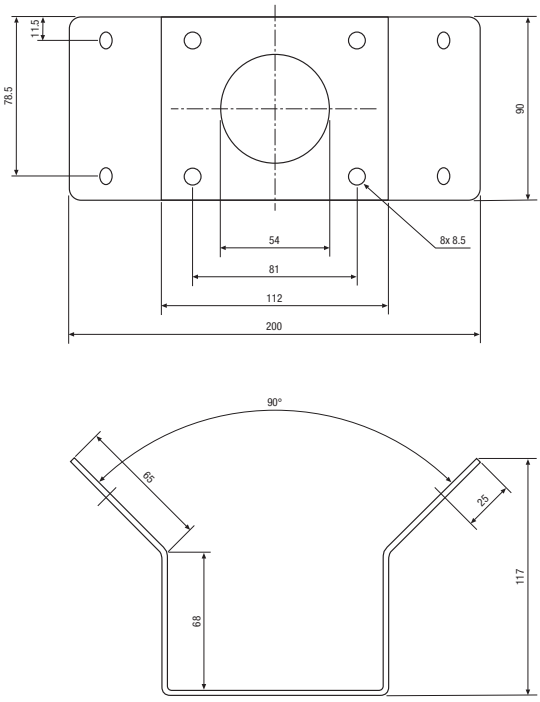
Straight Tube (Art. No. 200827)
Iron, Height: 250 mm (9.8 inches) ,Diameter: 50 mm (2 inches)
1 kg (2.2 lbs), Supplied with M8x12 screw x1, spring washer-8 x1, pendent tube washer x1, rubber washer-8 x1 and waterproof rubber x1.



Dimensions: mm

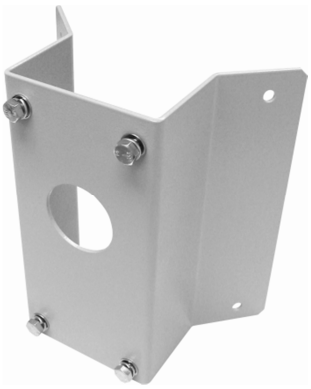
Corner Plate Mini (Art. No. 200831)
For mounting with Compact Pendent Mount.
200(L)×90(H)×117(D) mm (7.87×3.54×4.6 inches);
Supplied with washer-8 x4, spring washer-8 x4, M8x16 screw x4 and M8 nut x4.

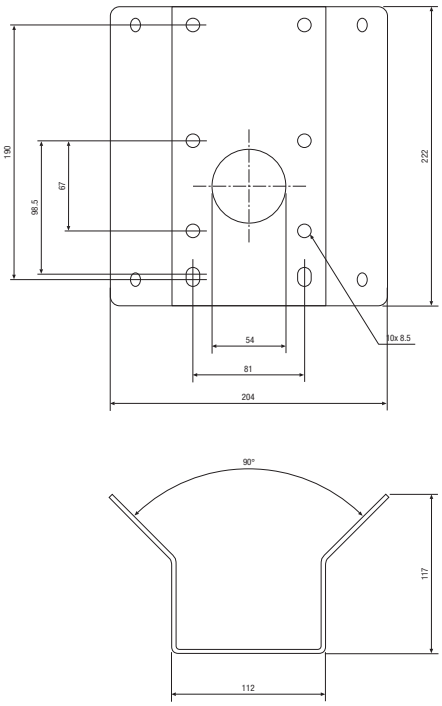




Dimensions: mm

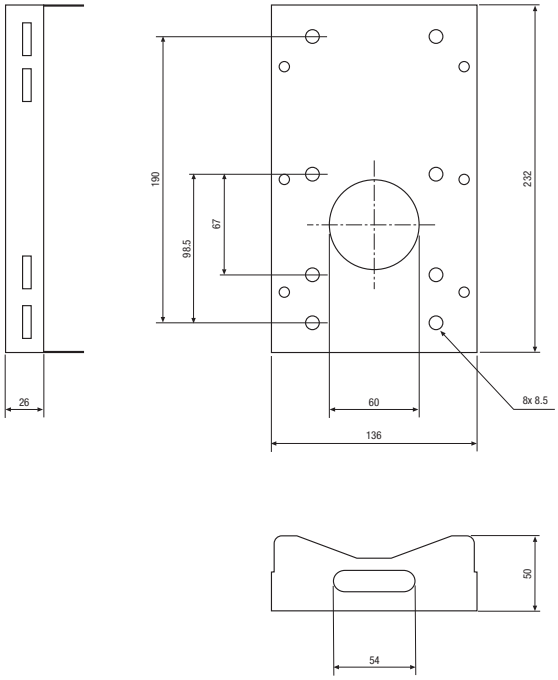
Corner Standard Mounting Plate (Art. No. 200830)
204(L)×222(H)×117(D) mm (8×8.74×4.6 inches); 2 kg (4.4 lbs);
Supplied with washer-8 x4, spring washer-8 x4, M8x16 screw x4, and M8 nut x4.





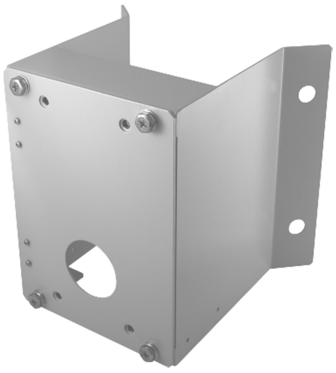
Dimensions: mm

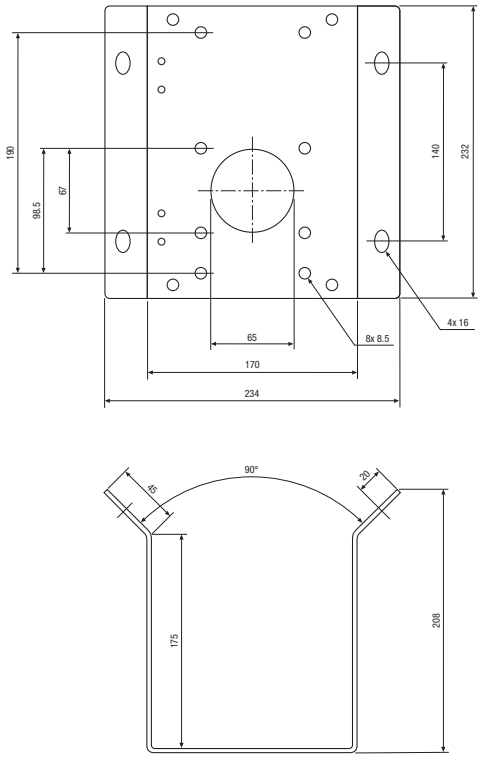
Pole Thin Direct Mounting (Art. No. 200834)
232(H)×136(W)×50(D) mm (9.1×5.4×2 inches); Diameter: 112~130 mm (4.4~5 inches); 0.7 kg (1.6 lbs). Supplied with stainless steel straps x4, M8x16 screw x4, washer x4 and spring washer-8 x4.



Dimensions: mm

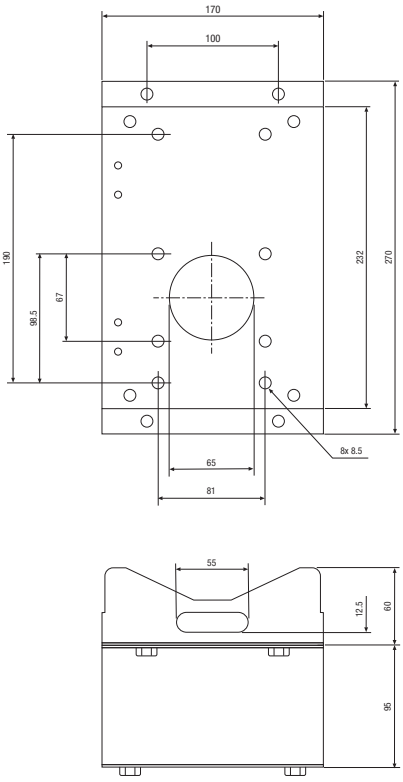
Corner Wide Box Mounting (Art. No. 200832)
232(H)×234(W)×208(D) mm (9.1×9.2×8.2 inches); 2.7 kg (6 lbs); Supplied with M8x16 screw x4, washer-8 x4, and spring washer-8 x4.
Power Box can be set inside the wide box.





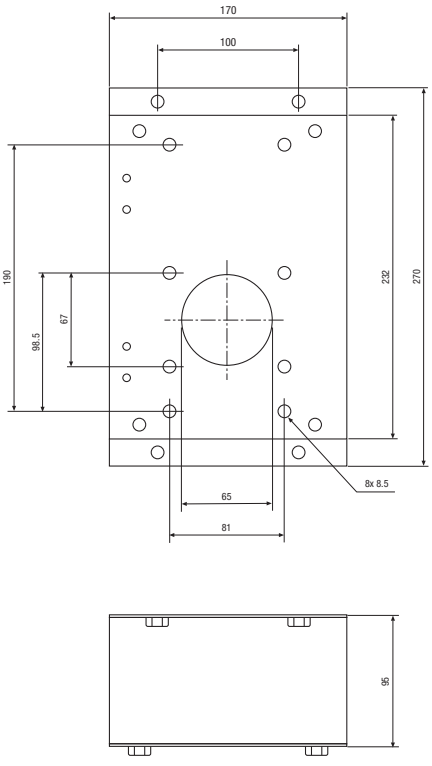
Dimensions: mm

Pole Wide Box Mounting (Art. No. 200835)
270(H)×170(W)×155(D) mm (10.6×6.7×6.1 inches); 3.2 kg (7.1 lbs); Supplied with M8x16 screw x4, washer-8 x4, spring washer-8 x4 and stainless steel straps x4.
Power Box can be set inside the wide box.



Dimensions: mm

Wall Box Mounting (Art. No. 200829)
270(H)×170(W)×95(D) (10.6×6.7×3.7 inches); 2.2 kg (4.84 lbs);
Supplied with M8x16 screw x4, washer-8 x4 and spring washer-8 x4
Power Box can be set inside the wall box.



Dimensions: mm

Stainless Steel Straps For fixing Pole Direct Mounting / Pole Box on the pole. Length: 650 mm (25.6 inches); Width: 12.7mm; Weight: 50g (0.1 lb)

All photos of the accessories are subject to change without notice.

4.3 Ceiling Mounting with Straight Tube

The Straight Tube is available in different length: 25 cm and 50 cm.

Package Contents:

- M8x12 Screw x1
- Spring Washer-8 x1
- Pendent Tube Washer x1
- Rubber Washer-8 x1
- Waterproof Rubber x1

Items Needed:

- Dome Camera
- Power Cable
- Ethernet Cable
- Straight Tube
- Screws and Screw Anchors for fixing the Straight Tube onto the ceiling

Tools Needed:

- Tool for drilling
- Tool for screwing

Follow the steps to mount the Dome Camera with the Straight Tube.

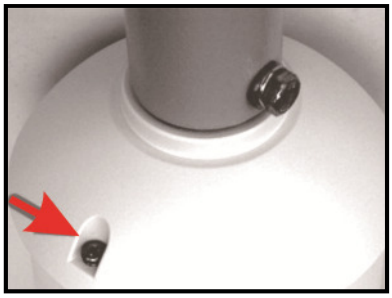
1) Ensure that the ceiling can support the weight of the Dome Camera and Straight Tube.
2) Make a cable entry hole on the ceiling.
3) Fix the suspension bracket to the ceiling with proper screws and screw anchors.
4) Thread the cables through the Straight Tube and the Mounting kit.

NOTE : After threading the cables, please block the cable entry hole with the supplied sponge(s) to avoid insects entering the tube.

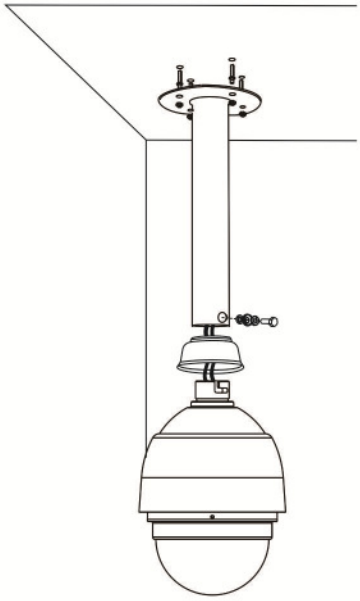
5) Fix the Mounting Kit to the Straight Tube with the supplied screws and washers.
6) Connect the cables to the Dome Camera.

7)

Mount the Dome Camera to the Mounting Kit. (Ensure the Dome Camera is fixed completely, and the thread holes on the Lock Screw Plate and Mounting Kit are aligned). Afterwards, screw the supplied M5 standard screw / security screw, as shown in the picture.



Ceiling Mounting: Straight Tube



4.4 Wall Mount

The Dome Camera can be mounted on the wall with Compact Pendent Mount, Standard Pendent Mount and Wall Box. Please follow the installation instructions below for mounting the Dome Camera via different ways.

4.4.1 Compact Pendent Mount

Package Contents:

- Rubber Washer-8 x1
- Pendent Tube Washer x1
- Spring Washer-8 x1
- M8x12 Screw x1

Items Needed:

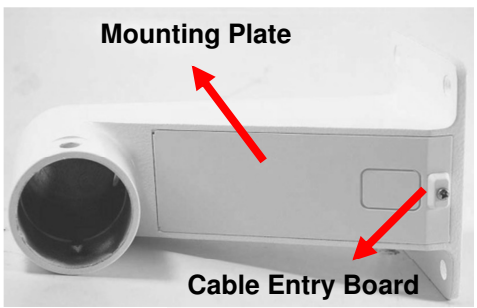
- Dome Camera
- Power Cable
- Ethernet Cable
- Compact Pendent Mount and equipped items (optional accessory)
- Mounting Kit
- Waterproof Rubber
- Screws and Screw Anchors for fixing the Compact Pendent Mount

Tools Needed:

- Tool for drilling
- Tool for screwing

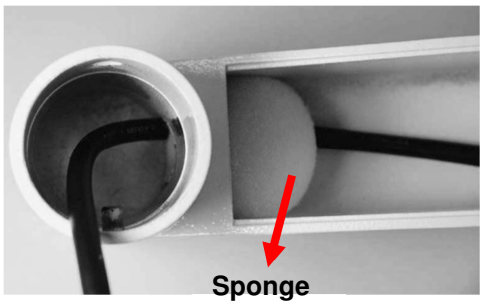
Follow the steps below to mount the Dome Camera with the Compact Pendent Mount.

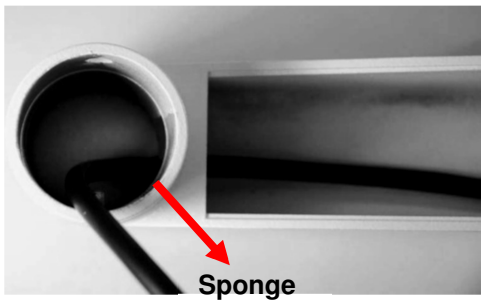
1) Make a cable entry hole on the wall to recess the cables. Otherwise, users could push up the Cable Entry Board on the Compact Pendent Mount's Mounting Plate to place the cables, as shown in the photo below.



2) Fix the Compact Pendent Mount on the wall with proper screws and screw anchors.
3) Attach the Waterproof Rubber to the Compact Pendent Mount.
4) Run the cable(s) through the Compact Pendent Mount with the Data Cable's 22-pin cable coming out of the outlet.

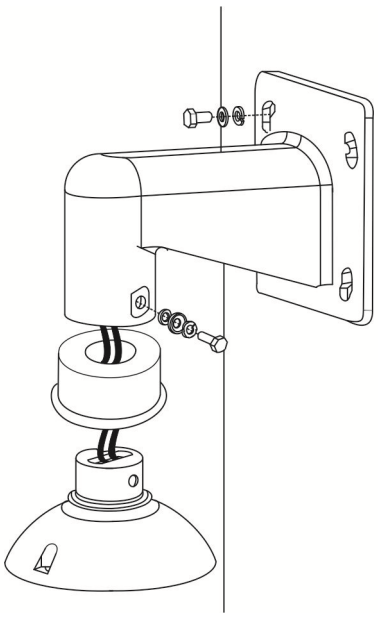
NOTE: Please block the cable entry hole with the supplied sponge to avoid insects entering the Pendent Mount. The sponge can be placed in two ways as shown in the illustrations below.





5) Thread the cable(s) through the Outdoor Mount Kit and join the Outdoor Mount Kit to the Compact Pendent Mount with the supplied screws and washers. Then adjust the Waterproof Rubber to the joint.
6) Connect the cable(s) to the Dome Camera.
7) Join the Dome Camera to the Mounting Kit with the supplied screw and washers.

Wall Mounting: Compact Pendent Mount + Mounting Kit



4.4.2 Standard Pendent Mount

Package Contents:

- M8x12 Screw x1
- Spring Washer-8 x1
- Pendent Tube Washer x1
- Rubber Washer-8 x1
- Sponge x2

Items Needed:

- Dome Camera
- Power Cable
- Ethernet Cable
- Standard Pendent Mount and equipped items (optional accessory)
- Mounting Kit
- Waterproof Rubber
- Screws and Screw Anchors for fixing the Standard Pendent Mount onto the ceiling (not supplied)

Tools Needed:

- Tool for drilling
- Tool for screwing

Follow the steps below to mount the Dome Camera with the Standard Pendent Mount.

1) Make a cable entry hole on the wall to recess the cables. Otherwise, users could push up the cable entry board on the Standard Pendent Mount's mounting plate to place the cables (see the illustration in section 4.4.1 Compact Pendent Mount > Step 1).

2) Fix the Standard Pendent Mount on the wall with proper screws and screw anchors.

3) Attach the Waterproof Rubber to the Standard Pendent Mount.

4) Run the cable(s) through the Standard Pendent Mount with the Data Cable's 22-pin cable coming out of the outlet.

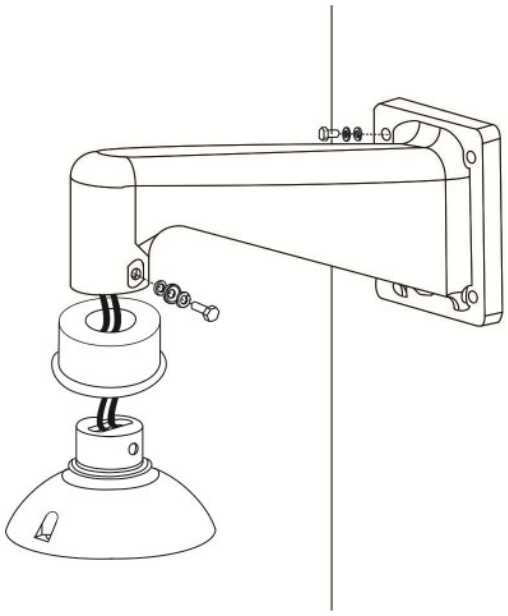
NOTE: Please block the cable entry hole with the supplied sponge to avoid insects entering the Pendent Mount. See the illustrations in section 4.4.1 Compact Pendent Mount > Step 4.

5) Thread the cable(s) through the Outdoor Mount Kit and join the Outdoor Mount Kit to the Standard Pendent Mount with the supplied screws and washers. Then adjust the Waterproof Rubber to the joint.

6) Connect the cable(s) to the Dome Camera.

7) Join the Dome Camera to the Mounting Kit with the supplied screw and washers.

Wall Mounting: Standard Pendent Mount + Mounting Kit



4.4.3 Wall Box Mounting

Package Contents:

- M8x16 Screw x4
- Washer-8 x4
- Spring Washer-8 x4

Items Needed:

- Dome Camera
- Power Cable
- Ethernet Cable
- Standard/Compact Pendent Mount and equipped items (optional accessory)
- Wall Box Mounting (optional accessory)
- Mounting Kit
- Waterproof Rubber
- Screws and Screw Anchors for fixing the Wall Box Mounting onto the ceiling (not supplied)

Tools Needed:

- Tool for drilling
- Tool for screwing

Follow the steps to mount the Dome Camera with the Standard/Compact Pendent Mount and Wall Box Mounting.

1) Make a cable entry hole on the wall to recess the cable(s).

2) Fix the Wall Box Mounting on the wall with proper screws and screw anchors. Then run the cable(s) through the hole on the Wall Box Mounting.

3) Fasten the Standard/Compact Pendent Mount onto the Wall Box Mounting with the supplied screws and washers. Then thread the cable(s) through the Standard/Compact Pendent Mount with the cable(s) coming out of the Pendent Mount's outlet.

NOTE: Please block the cable entry hole with the supplied sponge to avoid insects entering the Pendent Mount. See the illustrations in section 4.4.1 Compact Pendent Mount > Step 4.

4) Attach the Waterproof Rubber to the Standard/Compact Pendent Mount.

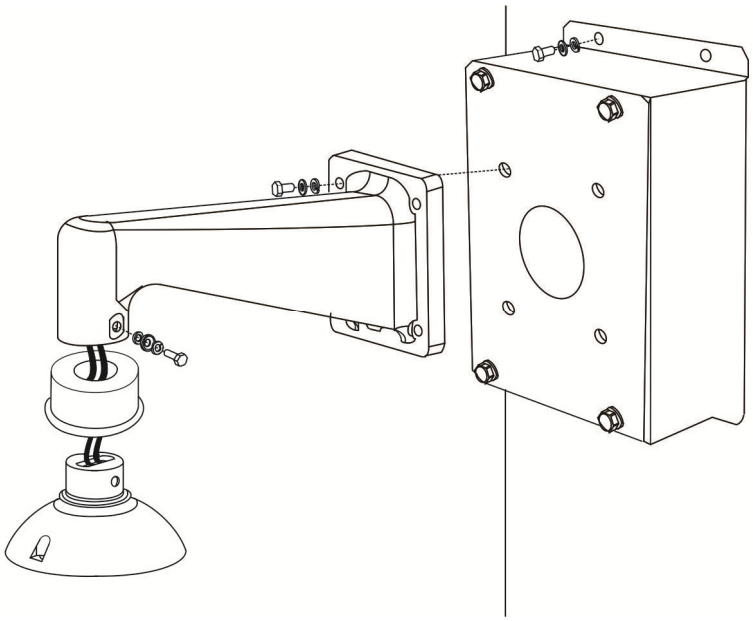
5) Thread the cable(s) through the Outdoor Mount Kit and join the Mounting Kit to the Standard/Compact Pendent Mount with the supplied screws and washers. Then adjust the Waterproof Rubber to the joint.

6) Connect the cable(s) to the Dome Camera.

7) Join the Dome Camera to the Mounting Kit with the supplied screw and washers.

Wall Box Mounting:

Wall Box Mounting + Standard/Compact Pendent Mount + Mounting Kit



4.5 Corner Mount

4.5.1 Corner Standard Mounting Plate/Corner Plate Mini

Package Contents:

- Washer-8 x4
- Spring Washer-8 ×4
- M8x16 Screw x4
- M8 Nut x4

Items Needed:

- Dome Camera
- Power Cable
- Ethernet Cable
- Standard/Compact Pendent Mount and equipped items (optional accessory)
- Corner Standard Mounting Plate/Corner Plate Mini (optional accessory)
- Mounting Kit
- Waterproof Rubber
- Screws and Screw Anchors for fixing the Corner Mounting Plate

Tools Needed:

- Tool for drilling
- Tool for screwing

Follow the steps below to mount the Dome Camera with the Corner Mounting Plate and Standard/Compact Pendent Mount.

1) Make a cable entry hole on the wall to recess the cable(s).

2) Fix the Corner Mounting Plate on the corner of the wall with proper screws and screw anchors. Then run the cable(s) through the hole on the Corner Mounting Plate.

3) Fasten the Standard/Compact Pendent Mount onto the Corner Mounting Plate with the supplied screws and washers. Then thread the cable(s) through the Standard/Compact Pendent Mount with the cable(s) coming out of the Pendent Mount's outlet.

NOTE: Please block the cable entry hole with the supplied sponge to avoid insects entering the Pendent Mount. See the illustrations in section 4.4.1 Compact Pendent Mount > Step 4.

4) Attach the Waterproof Rubber to the Standard/Compact Pendent Mount.

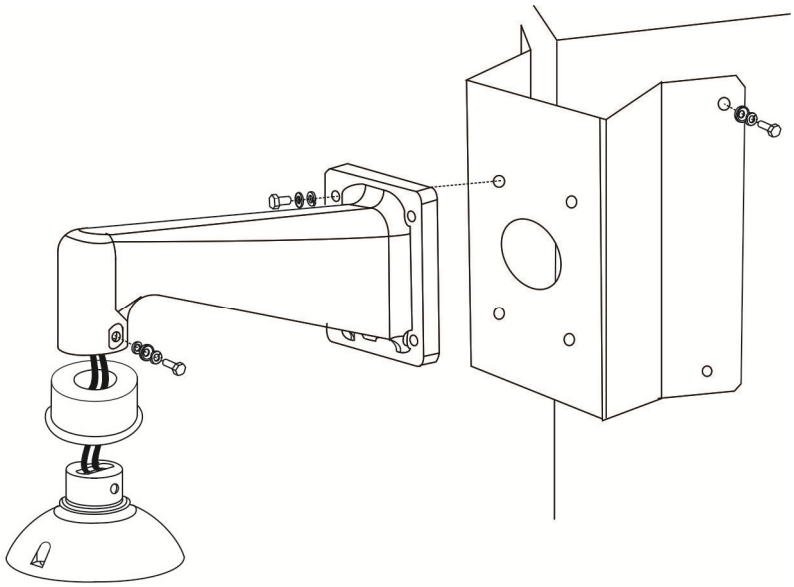
5) Thread the cable(s) through the Mounting Kit and join the Mounting Kit to the Standard/Compact Pendent Mount with the supplied screws and washers. Then adjust the Waterproof Rubber to the joint.

6) Connect the cable(s) to the Dome Camera.

7) Join the Dome Camera to the Mounting Kit with the supplied screw and washers.

Corner Wall Mounting:

Corner Standard/Mini Mounting Plate + Standard/Compact Pendent Mount + Mounting Kit



4.5.2 Corner Thin/Wide Box Mounting

Package Contents:

- M8x16 Screw x4
- Washer-8 x4
- Spring Washer-8 x4

Items Needed:

- Dome Camera
- Power Cable
- Ethernet Cable
- Standard/Compact Pendent Mount and equipped items (optional accessory)
- Corner Thin/Wide Box (optional accessory
- Mounting Kit (optional accessory)
- Waterproof Rubber
- Screws and Screw Anchors for fixing the Corner Thin/Wide Box

Tools Needed:

- Tool for drilling
- Tool for screwing

Follow the steps below to mount the Dome Camera with the Corner Thin/Wide Box and Standard/Compact Pendent Mount.

1) Make a cable entry hole on the wall to recess the cable(s).

2) Fix the Corner Thin/Wide Box on the corner of the wall with proper screws and screw anchors. Then run the cable(s) through the hole on the Corner Mounting Plate with the Data Cable's 22-pin cable coming out.

3) Fasten the Standard/Compact Pendent Mount onto the Corner Thin/Wide Box with the supplied screws and washers. Then thread the cable(s) through the Standard/ Compact Pendent Mount with the cable(s) coming out of the Pendent Mount's outlet.

NOTE: Please block the cable entry hole with the supplied sponge to avoid insects entering the Pendent Mount. See the illustrations in section 4.4.1 Compact Pendent Mount > Step 4.

4) Attach the Waterproof Rubber to the Standard/Compact Pendent Mount.

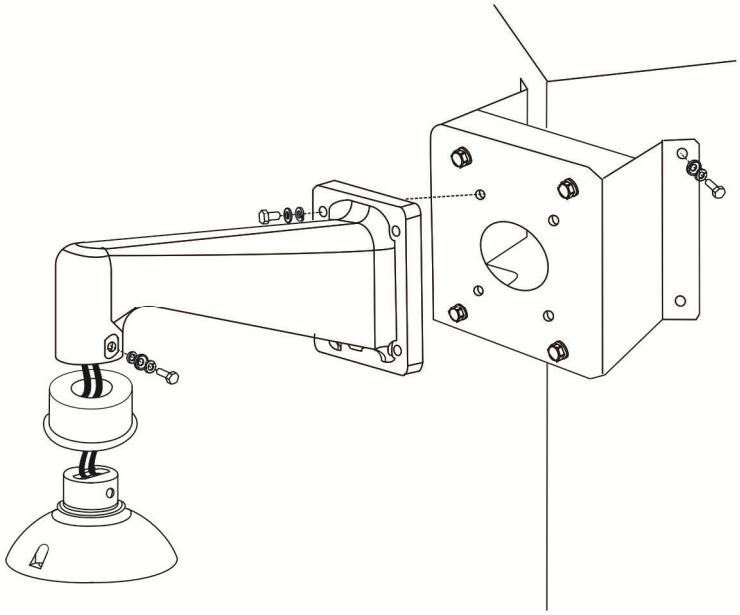
5) Thread the cable(s) through the Mounting Kit and join the Mounting Kit to the Standard/Compact Pendent Mount with the supplied screws and washers. Then adjust the Waterproof Rubber to the joint.

6) Connect the cable(s) to the Dome Camera.

7) Join the Dome Camera to the Mounting Kit with the supplied screw and washers.

Corner Box Mounting:

Corner Thin/Wide Box + Standard/Compact Pendent Mount + Mounting Kit



4.6 Pole Mount

4.6.1 Pole Thin/Wide Direct Mounting

Package Contents:

- M8x16 Screw x4
- Washer x4
- Stainless Steel Straps x4
- Spring Washer-8 x4

Items Needed:

- Dome Camera
- Power Cable
- Ethernet Cable
- Standard/Compact Pendent Mount and equipped items (optional accessory)
- Pole Thin/Wide Direct Mounting (optional accessory)
- Mounting Kit
- Waterproof Rubber
- Stainless Steel Straps for fixing the Pole Thin/Wide Direct Mounting

Tools Needed:

- Stainless Strap Cutter
- Tool for screwing

Follow the steps below to mount the Dome Camera with the Pole Thin/Wide Direct Mounting and Standard/Compact Pendent Mount.

1) Fasten the Pole Thin/Wide Direct Mounting on a pole with equipped stainless straps.

2) Run the cable(s) through the hole on the Pole Thin/Wide Direct Mounting.

3) Fasten the Standard/Compact Pendent Mount onto the Pole Thin/Wide Direct Mounting with the supplied screws and washers. Then thread the cable(s) through the Standard/Compact Pendent Mount with the cable(s) coming out of the Pendent Mount's outlet.

NOTE: Please block the cable entry hole with the supplied sponge to avoid insects entering the Pendent Mount. See the illustrations in section 4.4.1 Compact Pendent Mount > Step 4.

4) Attach the Waterproof Rubber to the Standard/Compact Pendent Mount.

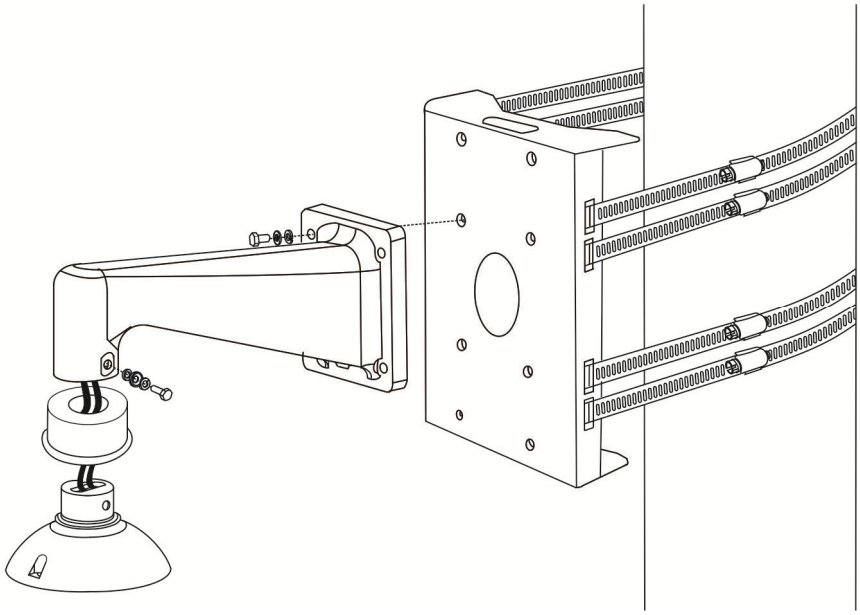
5) Thread the cable(s) through the Mounting Kit and join the Mounting Kit to the Standard/Compact Pendent Mount with the supplied screws and washers. Then adjust the Waterproof Rubber to the joint.

6) Connect the cable(s) to the Dome Camera.

7) Join the Dome Camera to the Mounting Kit with the supplied screw and washers.

Pole Direct Mounting:

Pole Thin/Wide Direct Mounting + Standard/Compact Pendent Mount + Mounting Kit



4.6.2 Pole Thin/Wide Box Mounting

Package Contents:

- M8x16 Screw x4
- Washer-8 x4
- Spring Washer x4,
- Stainless Steel Straps x4

Items Needed:

- Dome Camera
- Power Cable
- Ethernet Cable
- Standard/Compact Pendent Mount and equipped items (optional accessory)
- Pole Thin/Wide Box Mounting (optional accessory)
- Mounting Kit
- Waterproof Rubber
- Stainless Steel Straps for fixing the Pole Thin/Wide Box Mounting (optional accessory)

Tools Needed:

- Stainless Strap Cutter
- Tool for screwing

Follow the steps below to mount the Dome Camera with the Pole Thin/Wide Box and Standard/Compact Pendent Mount.

1) Fasten the Pole Thin/Wide Box on a pole with equipped stainless straps.

2) Run the cable(s) through the hole on the Pole Thin/Wide Box Mounting.

3) Fasten the Standard/Compact Pendent Mount onto the Pole Thin/Wide Box Mounting with the supplied screws and washers. Then thread the cable(s) through the Standard/Compact Pendent Mount with the cable(s) coming out of the Pendent Mount's outlet.

NOTE: Please block the cable entry hole with the supplied sponge to avoid insects entering the Pendent Mount. See the illustrations in section 4.4.1 Compact Pendent Mount > Step 4.

4) Attach the Waterproof Rubber to the Standard/Compact Pendent Mount.

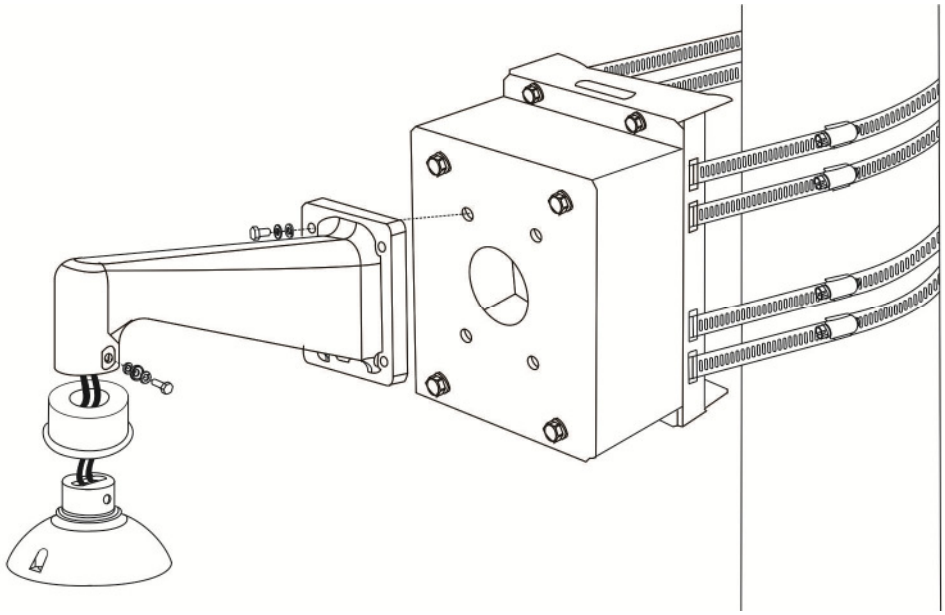
5) Thread the cable(s) through the Mounting Kit and join the Mounting Kit to the Standard/Compact Pendent Mount with the supplied screws and washers. Then adjust the Waterproof Rubber to the joint.

6) Connect the cable(s) to the Dome Camera.

7) Join the Dome Camera to the Mounting Kit with the supplied screw and washers.

Pole Box Mounting:

Pole Thin/Wide Box + Standard/Compact Pendent Mount + Outdoor Mount Kit



Part 2

User Manual

Version 1.4

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1. Overview

The Full HD Speed Dome IP Camera transmits digital video and audio data using wire connection. Live video can be monitored and recorded from window-based computer via network.

The video encoder supports real-time Main Profile H.264 Full HD resolution. Simultaneous dual streams, H.264/H.264 and H.264/MJPEG, are available for various network applications via speeding or limited bandwidth. Better image quality and high resolution are delivered by IP support. It eliminates the “combing” effect due to scene change and performs more stabilized image.

With IP solution, multiple and authorized users can view the immediate image from any location through network even using a standard web-browser. It enables users to access and remote the camera without at specific locations.

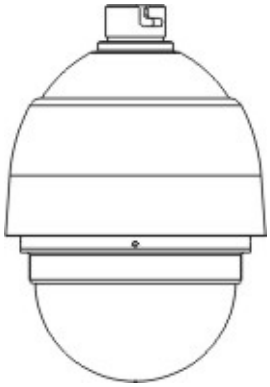
1.1 Features

- 18x, 20x Optical Zoom
- 8x Digital Zoom
- Simultaneous dual streams: H.264 and MJPEG
- Full HD Real-time Resolution
- Two-way audio support
- Removable IR Cut Filter
- Motion Detection
- Wide Dynamic Range (WDR)
- Digital Noise Reduction

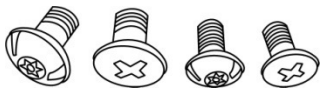
1.2 Package Contents

Please check the box contains the items listed here. If any item is missing or has defects, DO NOT install or operate the product and contact your dealer for assistance.

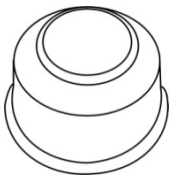
Outdoor Dome Camera Package



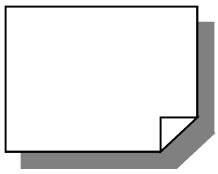
Dome Camera with Outdoor Mount Kit



M3 Standard Screw (x1)
M3 Security Screw (x1)*
M5 Standard Screw (x1)
M5 Security Screw (x1)*

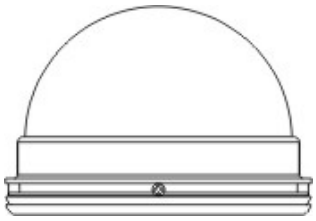


Waterproof Rubber

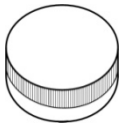


Quick Guide

CD: Operation Manuals



Optical Cover



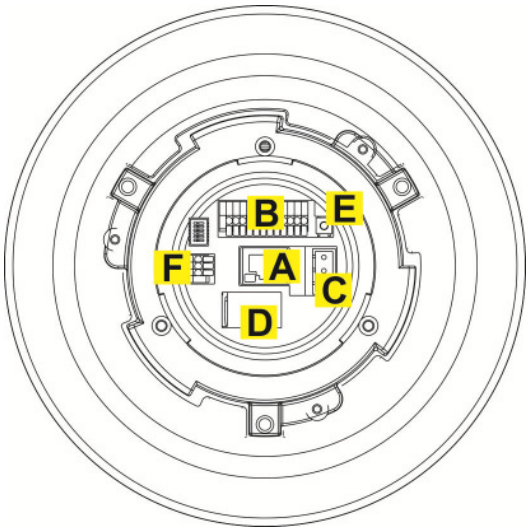
Lubricant

Security Torx*

*Optional: For Vandal Proof Cover only.

1.3 Switch/Connector Definition

There are various switches and connectors located on the Dome Camera's back plate as shown in the figures below. Please refer to the diagram and table accompanied with for use of each switch/connector.



Outdoor Model

A	RJ-45 Connector
B	ALARM I/O
C	Power
D	Micro SD Card Slot
E	Factory Reset Button
F	Audio I/O

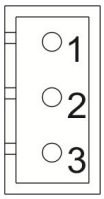
NOTE: DO NOT change the network Speed Dome Camera's Communication Switch factory default settings.

2. Camera Cabling

Please follow the instructions below to complete network Speed Dome Camera connection.

2.1 Connect Power

Please refer to the illustrations below to connect power core through the supplied power adaptor.



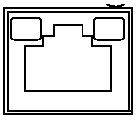
Pin	Definition
1	AC 24_1
2	FG
3	AC 24_2

2.2 Connect Ethernet Cable

Use of Category 5 Ethernet cable is recommended for network connection; to have best transmission quality, cable length shall not exceed 100 meters. Connect one end of the Ethernet cable to the RJ-45 connector of the network Speed Dome Camera, and the other end of the cable to the network switch or PC.

NOTE: In some cases, you may need use an Ethernet crossover cable when connecting the network Speed Dome Camera directly to the PC.

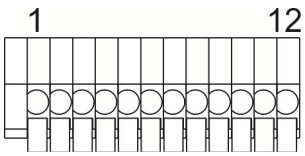
Check the status of the link indicator and activity indicator LEDs; if the LEDs are unlit, please check LAN connection.



Green Link Light indicates good network connection.
Orange Activity Light flashes for network activity indication.

2.3 Apply Alarm I/O

The network Speed Dome Camera supports 4 digital alarm inputs and 2 digital alarm outputs. Please make sure the alarm connections are properly wired before starting to configure alarm related settings on this “Application” page. Please refer to the pin definition table below for alarm system wiring.

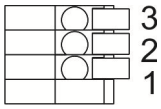


Pin	Definition
1	ALARM_OUT_NO_1
2	ALARM_OUT_NC_1
3	ALARM_OUT_COM_1
4	GND
5	ALARM_OUT_NO_2
6	ALARM_OUT_NC_2

Pin	Definition
7	ALARM_OUT_COM_2
8	GND
9	ALARM_IN_4
10	ALARM_IN_3
11	ALARM_IN_2
12	ALARM_IN_1

2.4 Apply Audio

Please refer to the illustrations below to set up the audio according to the Audio pin definition.



Pin	Definition
1	LINE_OUT
2	GND
3	LINE_IN

3. System Requirements

To perform the network Speed Dome Camera via web browser, please ensure your PC is in good network connection, and meet system requirement as described below.

Items	Minimum Requirement
Personal Computer	1. Intel® Pentium® IV, 3 GHz or higher, Intel® Core2 Duo, 2 GHz or higher 2. 1 GB RAM or more 3. AGP graphics card 64 MB RAM, DirectDraw
Operating System	Windows VISTA/ Windows XP/ Windows 7
Web Browser	Internet Explorer 6.0 or later, Firefox, Chrome, Safari
Network Card	10Base-T (10 Mbps) or 100Base-TX (100 Mbps) operation
Viewer	ActiveX control plug-in for Microsoft IE

4. Access Camera

NOTE: Access to IP cameras is achieved using eneo Zelaris software elements.

eneo Zelaris Elements: Video management freeware for all eneo IP products

You can use the free Zelaris Video Management Software to display and record data from your eneo IP camera. The software allows you to realise an IP-based video surveillance system with up to 16 eneo IP cameras. You will find the software with the relevant user instructions on the data medium which is provided with your camera. Alternatively, you can download the software from our website:

German: http://www.eneo-security.com/de_download_elements
English: http://www.eneo-security.com/en_download_elements
French: http://www.eneo-security.com/fr_download_elements
Polish: http://www.eneo-security.com/pl_download_elements

4.1 Camera Login

The network Speed Dome Camera's default IP address is: **192.168.1.10**.
Therefore, to access the camera for the first time, set the PC's IP address as: 192.168.1.XXX; for example:

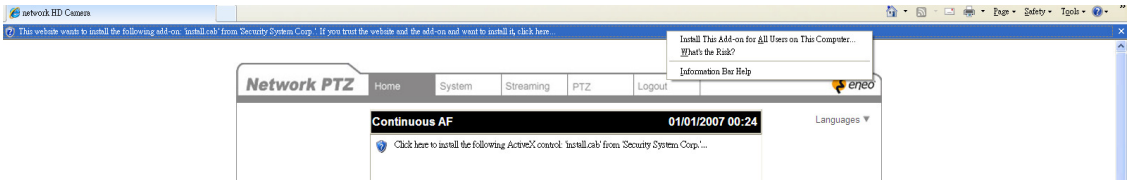
IP Address: 192.168.1.20
Subnet Mask: 255.255.255.0

Login ID & Password

- Key in the camera's IP address in the URL bar of the Web browser window and press "Enter."
- Enter the default user name (**admin**) and password (**admin**) in the prompt request dialogue.
  Note that user name is case sensitive.

Install the ActiveX Control

- After connecting to the network Speed Dome Camera, the request for installing the ActiveX control will appear just below the URL bar.
- Right Click on the information bar, and press "Install ActiveX Control…" to permit ActiveX control installation.

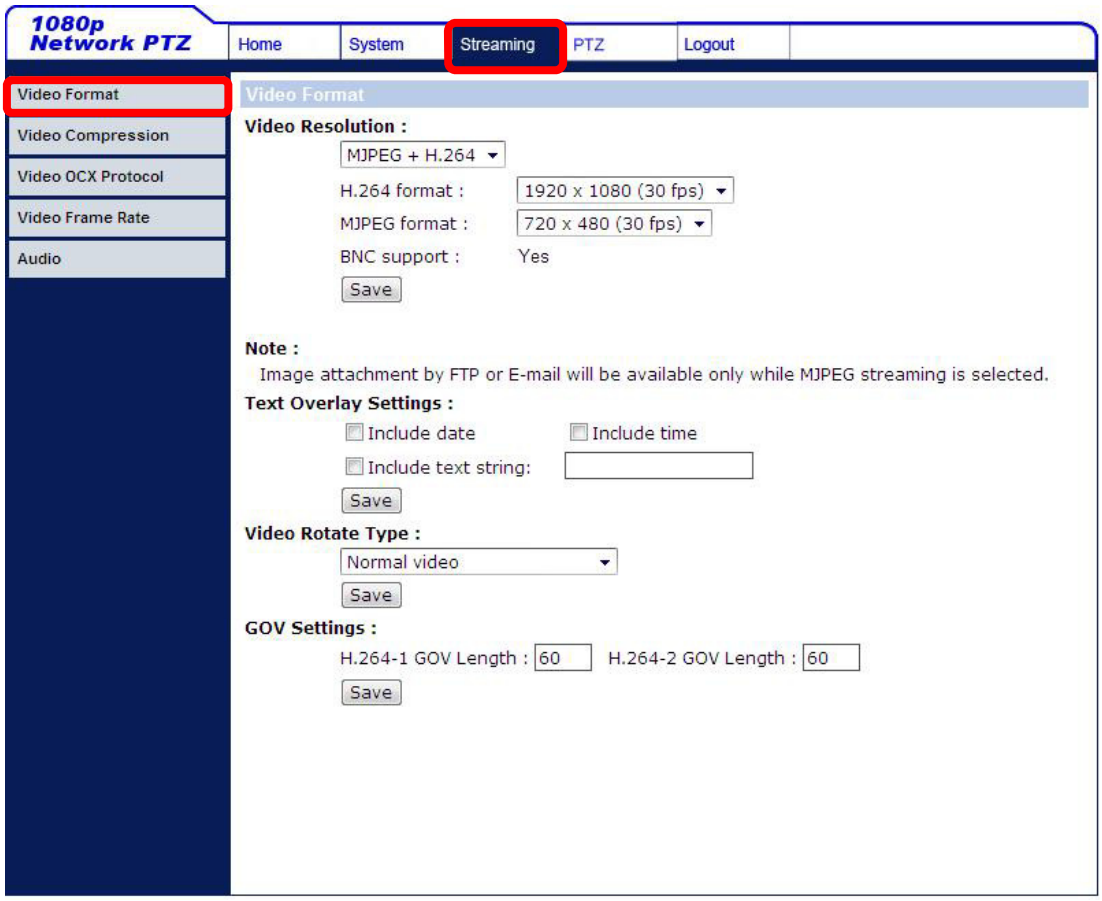


- In the pop-up security warning window, click on "Install" to start downloading DC Viewer software on the PC.
- Click on "Finish" after DC Viewer installation is complete.

5. Setup Video Resolution

Users can setup Video Resolution on Video Format page of the user-friendly browser-based configuration interface.

Video Format can be found under this path: **Streaming> Video Format**.



- **Video Format**

  Under Video Resolution section, select a preferred resolution setting. The available Video Resolution for MJPEG & H.264 format includes:

MJPEG+ H.264		
MJPEG	**H.264**	**BNC SUPPORT**
1920 x 1080 (30fps)	720 x 480 (30fps)*	√
	640 x 480 (30fps)	√
	352 x 240 (30fps)	√
1920 x 1080 (15fps)	1920 x 1080 (15fps)	√
	1280 x 1024 (30fps)	√
	1280 x 720 (30fps)	√
	1024 x 768 (30fps)	√
	800 x 600 (30fps)	-
1280 x 1024 (30fps)	1280 x 1024 (15fps)	√
	1280 x 720 (30fps)	-
	1024 x 768 (30fps)	-
	800 x 600 (30fps)	-
	720 x 480 (30fps)	√
	640 x 480 (30fps)	√
	352 x 240 (30fps)	√
1280 x 720 (30fps)	1280 x 720 (30fps)	√
	1024 x 768 (30fps)	-
	800 x 600 (30fps)	-
	720 x 480 (30fps)	√
	640 x 480 (30fps)	√
	352 x 240 (30fps)	√
1024 x 768 (30fps)	1024 x 768 (30fps)	√
	800 x 600 (30fps)	-
	720 x 480 (30fps)	√
	640 x 480 (30fps)	√
	352 x 240 (30fps)	√
800 x 600 (30fps)	800 x 600 (30fps)	√
	720 x 480 (30fps)	√
	640 x 480 (30fps)	√
	352 x 240 (30fps)	√
720 x 480 (30fps)	720 x 480 (30fps)	√
	640 x 480 (30fps)	√
	352 x 240 (30fps)	√

640 x 480 (30fps)	640 x 480 (30fps)	√
	352 x 240 (30fps)	√
H.264 + H.264		
H.264-1	**H.264-2**	**BNC SUPPORT**
1920 x 1080 (30fps)	720 x 480 (30fps)*	√
	640 x 480 (30fps)	√
	352 x 240 (30fps)	√
1920 x 1080 (15fps)	1920 x 1080 (15fps)	√
	1280 x 1024 (30fps)	√
	1280 x 720 (30fps)	√
	1024 x 768 (30fps)	√
	800 x 600 (30fps)	-
1280 x 1024 (30fps)	1280 x 1024 (15fps)	√
	1280 x 720 (30fps)	-
	1024 x 768 (30fps)	-
	800 x 600 (30fps)	-
	720 x 480 (30fps)	√
	640 x 480 (30fps)	√
	352 x 240 (30fps)	√
1280 x 720 (30fps)	1280 x 720 (30fps)	√
	1024 x 768 (30fps)	-
	800 x 600 (30fps)	-
	720 x 480 (30fps)	√
	640 x 480 (30fps)	√
	352 x 240 (30fps)	√
1024 x 768 (30fps)	1024 x 768 (30fps)	√
	800 x 600 (30fps)	-
	720 x 480 (30fps)	√
	640 x 480 (30fps)	√
	352 x 240 (30fps)	√
800 x 600 (30fps)	800 x 600 (30fps)	√
	720 x 480 (30fps)	√
	640 x 480 (30fps)	√
	352 x 240 (30fps)	√
720 x 480 (30fps)	720 x 480 (30fps)	√
	640 x 480 (30fps)	√
	352 x 240 (30fps)	√

640 x 480 (30fps)	640 x 480 (30fps)	√
	352 x 240 (30fps)	√
MJPEG ONLY		
MJPEG		**BNC SUPPORT**
1920 x 1080 (30fps)		√
1280 x 1024 (30fps)		√
1280 x 720 (30fps)		√
1024 x 768 (30fps)		√
800 x 600 (30fps)		√
720 x 480 (30fps)		√
640 x 480 (30fps)		√
H.264 ONLY		
H.264		**BNC SUPPORT**
1920 x 1080 (30fps)		√
1280 x 1024 (30fps)		√
1280 x 720 (30fps)		√
1024 x 768 (30fps)		√
800 x 600 (30fps)		√
720 x 480 (30fps)		√
640 x 480 (30fps)		√

(*) Default

Click on <Save> to confirm the setting.

NOTE: Refer to Full HD Speed Dome IP Camera Menu Tree for further function details.

Appendix A: Technical Specifications

Type	**PXD-2018PTZ1080**
Art. No.	**200824**
Resolution standard	HD 1080p
System	day&night
Sensor size	1/2.8"
Imager	CMOS Sony Progressive Scan
Sensitivity (at 50% video signal)	0.1Lux (colour); 0.03Lux (B&W)
Automatic gain control (AGC)	supplied
Automatic electronic shutter (ESC)	1/25 ~ 1/10,000sec.
Digital Noise Reduction (DNR)	yes, 2D NR
Low speed shutter	yes, ON/OFF switchable
White balance	automatic, indoor, outdoor, ATW, manual
Backlight compensation	BLC
Wide Dynamic Range (WDR)	yes
IR cut filter	switchable
Resolution max.	1920x1080
Resolution	1920x1080 (16:9), 1280x1024 (5:4), 1280x720 (16:9), 1024x768 (4:3), 800x600 (4:3), 720x480 (4:3), 640x480 (4:3), 352x288 (4:3)
Image transmission rate max.	25 images/sec.
Frame rate	25fps at 704x576
Privacy zones masking	16 zones masking, ON/OFF switchable
Activity detection	yes
Motion detector	10 zones
Analysis functions	activity detection
Text display	supplied
Sharpness correction	adjustment range: 0 ~ 15
Menu languages	German, English, French, Italian, Russian
OSD function control	resolution, presets, motion detection, BLC, DNR, WDR, bit rate, day&night, password
External connections	alarm input, alarm output, audio input, audio output
Video outputs	no
Audio support	yes

Audio	1/1 Line input and output
Alarm inputs	4, 4x for NO/NC contacts
Alarm output	1x Relay out (120VAC 30VDC)
Alarm processing	SD-card recording, alarm out, FTP, E-Mail, PTZ action
Internal storage	Micro SD card
Compression standard	H.264, MJPEG
Audio standards	G.711, G.726, ADPCM/AAC
Bandwidth	controllable bandwidth and frame rate
Stream types	H.264, MJPEG multiple
Network connection	RJ-45
Network interface	10/100Base-TX, RJ45
Web browser	MS Internet Explorer vers. 7.0 or higher, Safari (Java), Mozilla Firefox (Java), Google Chrome (Java)
Network protocols	TCP/IP, UDP, RTP, RTSP, HTTP, HTTPS, ICMP, FTP, SMTP, DHCP, PPPoE, UPnP, IGMP, SNMP, IPv4, IPv6, IEE 802.1
Lens type	zoom
Lens mount	-
Focal length	4.7mm – 84.6mm
Horizontal angle of view	54.2° - 3.2°
Aperture range	F1.6 ~ F2.7
Digital zoom	12x
Iris control	DC
Focus control	automatic and manual
MOD (Minimum object distance)	1m
Illumination	no
Serial interfaces	no
Remote configuration	via web browser
Firmware update	via network interface
Operation protection	Password protected
Password protection	yes, two levels (administrator and user)
e-PTZ support	no
Speed (manual control)	1-80°/sec.
Preset speed	up to 400°/sec.
Rotation range	Continuous: 360°
Auto flip function	mechanical, digital, off

Proportional pan and tilt	continually decreases pan and tilt speeds in proportion to depth of zoom
Patterns	8 patterns
Presets	256 presets
Home position	included (with multiple park actions)
Tours	up to 8 user programmable guard tours
Supply voltage	24VAC
Power over Ethernet	HiPoE w/o heather function
Blower	yes
Heater	yes
Power consumption	65W
Mounting	optional wall/flush mounting accessories
Temperature range (operation)	-40℃~+50℃
Vandalism resistant	yes
Housing	outdoor
Housing material	metal / plastic
Colour (housing)	RAL 9003
Colour (bubble)	clear
Protection rating	IP66
Management Software Support	Zelaris
SDK	available
ONVIF	yes
Certificates	CE, IK10
Dimensions	see drawing
Weight	2.4kg
Parts supplied	remote viewer software, screw set, manual

Optional Accessories

Appendix B: Delete the Existing DC Viewer

For users who have installed the DC Viewer in the PC previously, please first remove the existing DC Viewer from the PC before accessing to the network Speed Dome Camera.

Deleting the DC Viewer

Activate <Control Panel>, and then double click on <Add or Remove Programs>. In the <Currently installed programs> list, select <DCViewer> and click on the button <Remove> to uninstall the existing DC Viewer.

Deleting Temporary Internet Files

To improve browser performance, it is suggested to clean up the all the files in the Temporary Internet Files.

The procedure is as follows:

Step 1: Click on the <Tools> tab and select the option <Internet Options>.

Step 2: Click on <Delete> button under <Browsing history> section. Then click on the <Delete Files> button under the <Temporary Internet files> section.

A confirmation window will pop up. Click on <Yes> to start deleting the files.

Appendix C: Setup Internet Security

If ActiveX control installation is blocked, please either set Internet security level to default or change ActiveX controls and plug-ins settings.

Internet Security Level: Default

Step 1: Start the Internet Explorer (IE).

Step 2: Click on the <Tools> tab on the menu bar and select <Internet Options>.

Step 3: Click on the <Security> tab, and select <Internet> zone.

Step 4: Down the page, click on the <Default Level> button and click on <OK> to confirm the setting. Close the browser window, and restart a new one later to access the network Speed Dome Camera.

ActiveX Controls and Plug-ins Settings

Step 1: Repeat **Step 1~3** of the previous section above.

Step 2: Down the page, click on the <Custom Level> button to change ActiveX controls and plug-ins settings. The Security Settings window will pop up.

Step 3: Under <ActiveX controls and plug-ins>, set **ALL** items (as listed below) to <Enable> or <Prompt>. Please note that the items vary by IE version.

ActiveX controls and plug-ins settings:

1. Allow previously unused ActiveX controls to run without prompt.
2. Allow Scriptlets.
3. Automatic prompting for ActiveX controls.
4. Binary and script behaviors.
5. Display video and animation on a webpage that does not use external media player.
6. Download signed ActiveX controls.
7. Download unsigned ActiveX controls.
8. Initialize and script ActiveX controls not marked as safe for scripting.
9. Run ActiveX controls and plug-ins.
10. Script ActiveX controls marked safe for scripting.

Step 4: Click on <OK> to accept the settings and close the Security Settings window.

Step 5: Click on <OK> to close the Internet Options screen.

Step 6: Close the browser window, and restart a new one later for accessing the Camera.

Part 3

Menu Tree

Version 1.2

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Appendix A: Install UPnP Components 101

1. Overview

The Full HD Speed Dome IP Camera transmits digital video and audio data using wire connection. Live video can be monitored and recorded from window-based computer via network.

The video encoder supports real-time Main Profile H.264 Full HD resolution. Simultaneous dual streams, H.264/H.264 and H.264/MJPEG, are available for various network applications via speeding or limited bandwidth. Better image quality and high resolution are delivered by IP support. It eliminates the “combing” effect due to scene change and performs more stabilized image.

With IP solution, multiple and authorized users can view the immediate image from any location through network even using a standard web-browser. It enables users to access and remote the camera without at specific locations.

2. Menu Tree

There are five setting tabs including <Home>, <System>, <Streaming>, <PTZ> and <Logout>.

Home

Users can monitor live video of the targeted area.

System setting

The Administrator can set host name, system time, root password, network related settings, etc. Further details will be interpreted in the section System.

Streaming setting

The Administrator can modify video resolution and rotate type and select video compression mode in this page.

PTZ setting

Users are allowed to program Preset Point(s), Cruise Line(s), Auto Pan Path(s) and Sequence Line(s) via PTZ controls, and adjust various camera parameters including Auto Exposure (AE), White Balance (WB), Back Light Compensation (BLC), Sharpness, Exposure Compensation, Digital Zoom, etc.

Logout

Click on the tab to re-login the IP Camera with another username and password.

2.1 Home Page

Click on the tab <**Home**> to access the Home Page. There are several function buttons on the Home pate. Detailed information of each item is as described in the following chapter.

2.1.1 Function Items on Home Page

Multiple Languages Support

Multiple languages are supported, including German, English, French, Italian, Korean, Simplified Chinese, Russian, etc. for the viewer window interface.

Digital Zoom Control

In the full screen mode, users can implement digital PTZ by rotating the mouse wheel (for zoom in/out), and drag the mouse into any direction.

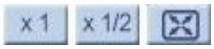
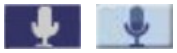
Screen Size Adjustment 

Image display size can be adjusted to x1/2 and full screen.

Talk button  (on/off)

Talk function allows the local site talks to the remote site. Click on the button to switch it to on/off. Please refer to Security: Add user >> Talk/Listen for further details.

NOTE: This function is only available for User who has granted this privilege by the Administrator.

Speaker button (on/off)

Click on the <Speaker> button to mute/activate the audio.

NOTE: This function is only available for User who has granted this privilege by the Administrator.

Snapshot button

Click on the button and the JPEG snapshots will automatically be saved in the appointed place. The default place of saving snapshots is: C:\. To change the storage location, please refer to File Location for further details.

NOTE: For users with Windows 7 operating system, it is required to log on as an Administrator to implement the Web Recording function.

Video Streaming Pause /Restart button (pause/restart)

Click on the <Stop> button to disable video streaming, the live video will be displayed as black. Press the <restart> button to show the live video again.

Web Recording button (on/off)

Click on the <Recording> button and the Live View through the web browsing will be directly recorded to the specific location on the local hard drive, which could be configured in the <File Location> page. The default storage location for the web recording is: C:\. Please refer to File Location for further details.

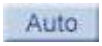
NOTE: For users with Windows 7 operating system, it is required to log on as an Administrator to implement the Web Recording function.

Zoom Adjustment

(Wide/ Tele)

Click on the buttons <Wide/Tele> to control zoom in/out. Or move the cursor closely onto the zoom adjustment bar to the desired zoom ratio.

Focus Adjustment

- **Auto Focus (Continuous AF)** 

  Click on the <Auto> button to enable AF mode. In this mode, the camera will keep in focus automatically and continuously regardless of zoom changes or any view changes. The Focus status will also be displayed above the live video pane as shown below.

- **Manual button**

  Click on the <Manual> button, and users can adjust focus manually via Near/Far buttons.

- **Near/Far buttons**

  Click on the <Manual> button, and users can adjust focus manually via <Near> and <Far> buttons. The status will also be displayed above the screen as shown below.

Pan/Tilt Control

Users can implement pan/tilt control by first moving the cursor to the live video pane; then left click and drag the pointer in any direction.

Optical/Digital Zoom Control

In Normal View display mode, users can implement zoom in/out by first moving the cursor to the live video pane and then rotating the mouse wheel. As in Full Screen mode, users can directly rotate the mouse wheel to zoom in/out on the image. Digital zoom is only available when the function is activated and which is set in <Camera-Misc1> page under the <PTZ> tab; refer to the Section Camera—Misc 1 for details. When the camera reaches the limit of its optical range, it will automatically switch to digital zoom.

2.2 System

Under the tab **<System>**, there are categories as the table below:

System	System Security Network DDNS Mail FTP HTTP Application Motion Detection Tampering Storage Management Recording File Location View Log File View User Information View Parameters Factory Default Software Version Software Upgrade Maintenance

NOTE: The System configuration page is only accessible by the Administrator.

2.2.1 System

The System Setting can be found under the path: **System> System**.

Host Name

The name is for camera identification. If alarm function is enabled and is set to send alarm message by Mail/FTP, the host name entered here will display in the alarm message.

Time Zone

Select the time zone you are in from the drop-down menu.

Enable Daylight Saving Time

To enable DST, please check the item and then specify time offset and DST duration. The format for time offset is [hh:mm:ss]; for instance, if the amount of time offset is one hour, please enter “01:00:00” into the field.

Sync With Computer Time

Select the item and video date and time display will synchronize with the PC's.

Manual

The Administrator can set video date, time and day manually. Entry format should be identical with that shown next to the enter field.

Sync with NTP Server

Network Time Protocol (NTP) is an alternate way to synchronize your camera's clock with a NTP server. Please specify the server you wish to synchronize in the enter field. Then select an update interval from the drop-down menu. For further information about NTP, please see the web site: www.ntp.org.

2.2.2 Security

The Security setting can be found under this path: **System> Security**.

Click the Security category, there will be a drop-down menu with tabs including <User>, <HTTPS>, <IP Filter>, and <IEEE 802.1X>.

2.2.2.1 User

The User setting can be found under this path: **System> Security> User**.

Admin Password

Change the administrator's password by inputting the new password in both text boxes. The input characters/numbers will be displayed as dots for security purposes. After clicking on <Save>, the web browser will ask the Administrator for the new password for access. The maximum length of the password is 14 digits.

NOTE: The following characters are valid: A-Z, a-z, 0-9, !#$%&'-.@^_~.

Add user

Type the new user's name and password and click on <Add> to add the new user. Both user name and password can be up to 16 characters. The new user will be displayed in the user name list. There is a maximum of twenty user accounts. Each user can be assigned the privileges of **<Camera control>**, **<Talk>** and **<Listen>**.

- **I/O access**
  This item supports fundamental functions that enable users to view video when accessing to the camera.

- **Camera control**
  This item allows the appointed User to change camera parameters on the Camera Setting page.

- **Talk/Listen**
  Talk and Listen functions allow the appointed user in the local site (PC site) communicating with, for instance, the administrator in the remote site.

Manage User

- **Delete user**
  To delete a user, select the user name you would like to delete from the drop-down user list and then click on <Delete> to remove it.

- **Edit user**
  Select a user name from the drop-down user list and click on <Edit> to edit the user's password and privilege.

NOTE: It is required to enter the User password as well as select the function open to the user. When finished, click on <Save> to modify the account authority.

2.2.2.2 HTTPS

The HTTPS setting can be found under this path: **System> Security> HTTPS**.

<HTTPS> allows secure connections between the IP Camera and web browser using <Secure Socket Layer (SSL)> or <Transport Layer Security (TLS)>, which ensure camera settings or Username/ Password info from snooping. It is required to install a self-signed certificate or a CA-signed certificate for implementing <HTTPS>.

To use HTTPS on the IP Camera, a HTTPS certificate must be installed. The HTTPS certificate can be obtained by either creating and sending a certificate request to a Certificate Authority (CA) or creating a self-signed HTTPS certificate, as described below.

Create Self-signed Certificate

Before a CA-issued certificate is obtained, users can create and install a self-signed certificate first.

Click on <Create> button under “Create self-signed certificate” and provide the requested information to install a self-signed certificate for the IP Camera. Please refer to the last part of this section: Provide the Certificate Information for more details.

NOTE: The self-signed certificate does not provide the same high level of security as when using a CA-issued certificate.

Install Signed Certificate

Click on the <Create Certificate Request> button to create and submit a certificate request in order to obtain a signed certificate from CA.

Provide the request information in the create dialog. Please refer to the following Provide the Certificate Information for more details.

When the request is complete, the subject of the Created Request will be shown in the field. Click on <Properties> below the Subject field, copy the PEM-formatted request and send it to your selected CA.

When the signed certificate is returned, install it by uploading the signed certificate.

Provide the Certificate Information

To create a Self-signed HTTPS Certificate or a Certificate Request to CA, please enter the information as requested:

	Create Self Signed Certificate	Create Certificate Request
Country	√	√
State or Province	√	√
Locality	√	√
Organization	√	√
Organizational Unit	√	√
Common Name	√	√
Valid Day	√	-

- **Country**
  Enter a two-letter combination code to indicate the country the certificate will be used in. For instance, type in “US” to indicate United States.

- **State or province**
  Enter the local administrative region.

- **Locality**
  Enter other geographical information.

- **Organization**
  Enter the name of the organization to which the entity identified in “Common Name” belongs.

- **Organization Unit**
  Enter the name of the organizational unit to which the entity identified in “Common Name” belongs.

- **Common Name**
  Indicate the name of the person or other entity that the certificate identifies (often used to identify the website).

- **Valid days**
  Enter the period in days (1~9999) to indicate the valid period of certificate.

Click on <OK> to save the Certificate Information after complete.

2.2.2.3 IP Filter

The IP Filter setting can be found under this path: **System> Security> IP Filter**.

Using the IP filter, access to the IP Camera can be restricted by denying/allowing specific IP addresses.

- **Enable IP Filter**
  Check the box to enable the IP Filter function. Once enabled, the listed IP addresses (IPv4) will be allowed/ denied access to the IP Camera.

  Select <Allow> or <Deny> from the drop-down list and click on the <Apply>button to determine the IP Filter behavior.

- **Add/ Delete IP Address**
  Input the IP address and click on the <Add> button to add a new filtered address.

  The Filtered IP Addresses list box shows the currently configured IP addresses. Up to 256 IP address entries may be specified.

  To remove an IP address from the list, please select the IP and then click the <Delete> button.

2.2.2.4 IEEE 802.1X

The IEEE 802.1X setting can be found under this path: **System> Security> IEEE 802.1X**.

The IP Camera is allowed to access a network protected by 802.1X/EAPOL (Extensible Authentication Protocol over LAN).

Users need to contact with the network administrator for gaining certificates, user IDs and passwords

CA Certificate

The CA certificate is created by the Certification Authority for the purpose of validating itself. Upload the certificate for checking the server's identity.

Client Certificate/ Private Key

Upload the Client Certificate and Private Key for authenticating the IP Camera itself.

Settings

- **Identity**
  Enter the user identity associated with the certificate. Up to 16 characters can be used.

- **Private Key Password**
  Enter the password (maximum 16 characters) for your user identity.

Enable IEEE 802.1X

Check the box to enable IEEE 802.1X.

Click on <Save> to save the IEEE 802.1X/ EAP- TLS setting.

2.2.3 Network

The Network setting can be found under this path: **System> Network**.

Click on the <Network> category, there will be a drop-down menu with tabs including <Basic>, <QoS>, <SNMP>, and <UPnP>.

2.2.3.1 Basic

The Basic setting can be found under this path: **System> Network> Basic**.

Users can choose to connect to the IP Camera with fixed or dynamic (DHCP) IP address. The IP Camera also provides PPPoE support for users who connect to the network via PPP over Ethernet (PPPoE).

General

- **Get IP address automatically (DHCP)**
  The camera's default setting is <Use fixed IP address>. Please refer to User's Manual for login with the default IP address.

  If select <Get IP address automatically>, after the IP Camera restarts, users can search it through the installer program: DeviceSearch.exe, which can be found in "DeviceSearch" folder in the supplied CD.

  NOTE: Please make the record of the IP Camera's MAC address, which can be found in the label of the camera, for identification in the future.

- **Use fixed IP address**
  To setup static IP address, select <Use fixed IP address> and move the cursor to the IP address blank and insert the new IP address, ex. 192.168.7.123; then go to the Default gateway (explained later) blank and change the setting, ex. 192.168.7.254. Press <Save> to confirm the new setting.

  When using static IP address to login to the IP Camera, users can access it either through "DeviceSearch" software (refer to User's Manual) or input the IP address in the URL bar and click on <Enter>.

  - IP address
    This is necessary for network identification.

- Subnet mask
  It is used to determine if the destination is in the same subnet. The default value is “255.255.255.0”.

- Default gateway
  This is the gateway used to forward frames to destinations in different subnet. Invalid gateway setting will fail the transmission to destinations in different subnet.

- Primary DNS
  Primary DNS is the primary domain name server that translates hostnames into IP addresses.

- Secondary DNS
  Secondary DNS is a secondary domain name server that backups the primary DNS.

Use PPPoE

For the PPPoE users, enter the PPPoE Username and Password into the fields, and click on the <Save> button to complete the setting.

Advanced

- **Web Server port**
  The default web server port is 80. Once the port is changed, the user must be notified the change for the connection to be successful. For instance, when the Administrator changes the HTTP port of the IP Camera whose IP address is 192.168.0.100 from 80 to 8080, the user must type in the web browser “http://192.168.0.100:8080” instead of “http://192.168.0.100”.

- **RTSP port**
  The default setting of RTSP Port is 554; the setting range is from 1024 to 65535.

- **MJPEG over HTTP port**
  The default setting of MJPEG over HTTP Port is 8008; the setting range is from 1024 to 65535.

- **HTTPS port**
  The default setting of HTTPS Port is 443; the setting range is from 1024 to 65535.

NOTE: Be aware to choose the different port from the one set for the web server port.

IPv6 Address Configuration

With IPv6 support, users can use the corresponding IPv6 address for browsing. Enable IPv6 by checking the box and click on <Save> to complete the setting.

2.2.3.2 QoS

The QoS (Quality of Service) setting can be found under this path: **System> Network> QoS**.

QoS allows providing differentiated service levels for different types of traffic packets, which guarantees delivery of priority services especially when network congestion occurs. Adapting the Differentiated Services (DiffServ) model, traffic flows are classified and marked with DSCP (DiffServ Codepoint) values, and thus receive the corresponding forwarding treatment from DiffServ capable routers.

DSCP Settings

The DSCP value range is from 0 to 63. The default DSCP value is 0, which means DSCP is disabled. The IP Camera uses the following QoS Classes: Video, Audio and Management.

- **Video DSCP**
  The class consists of applications such as MJPEG over HTTP, RTP/RTSP and RTSP/HTTP.

- **Audio DSCP**
  This setting is only available for the IP Cameras that support audio.

- **Management DSCP**
  The class consists of HTTP traffic: Web browsing.

NOTE: To enable this function, please make sure the switches/ routers in the network support QoS.

2.2.3.3 SNMP

The SNMP (Simple Network Management Protocol) setting can be found under this path: **System> Network> SNMP**.

With Simple Network Management Protocol (SNMP) support, the IP Camera can be monitored and managed remotely by the network management system.

SNMP v1/ v2

- **Enable SNMP v1/ v2**
  Select the version of SNMP to use by checking the box.

- **Read Community**
  Specify the community name that has read-only access to all supported SNMP objects. The default value is “public”.

- **Write Community**
  Specify the community name that has read/write access to all supported SNMP objects (except read-only objects). The default value is “write”.

Traps for SNMP v1/ v2

Traps are used by the IP Camera to send massages to a management system for important events or status changes.

- **Enable Traps**
  Check the box to activate trap reporting.

- **Trap address**
  Enter the IP address of the management server.

- **Trap community**
  Enter the community to use when sending a trap message to the management system.

Trap Option

- **Warm Start**
  A Warm Start SNMP trap signifies that the SNMP device, i.e. IP Camera, performs software reload.

Click on <Save> button when complete.

2.2.3.4 UPnP

The UPnP setting can be found under this path: **System> Network> UPnP**.

UPnP Setting

- **Enable UPnP**
  When the UPnP is enabled, whenever the IP Camera is presented to the LAN, the icon of the connected IP Cameras will appear in My Network Places to allow for direct access.

  NOTE: To enable this function, please make sure the UPnP component is installed on your computer. Please refer to Install UPnP components for UPnP component installation procedure.

- **Enable UPnP port forwarding**
  When the UPnP port forwarding is enabled, the IP Camera is allowed to open the web server port on the router automatically.

  NOTE: To enable this function, please make sure that your router supports UPnP and it is activated.

- **Friendly name**
  Set the name for the IP Camera for identity.

2.2.4 DDNS

The DDNS setting can be found under this path: **System> DDNS**.

Dynamic Domain Name System (DDNS) allows a host name to be constantly synchronized with a dynamic IP address. In other words, it allows those using a dynamic IP address to be associated to a static domain name so others can connect to it by name.

Enable DDNS

Check the item to enable DDNS.

Provider

Select one DDNS host from the provider list.

Host name

Enter the registered domain name in the field.

Username/E-mail
Enter the username or e-mail required by the DDNS provider for authentication.

Password/Key
Enter the password or key required by the DDNS provider for authentication.

2.2.5 Mail

The Mail setting can be found under this path: **System> Mail**.

The Administrator can send an e-mail via Simple Mail Transfer Protocol (SMTP) when an alarm is triggered. SMTP is a protocol for sending e-mail messages between servers. SMTP is a relatively simple, text-based protocol, where one or more recipients of a message are specified and the message text is transferred.

Two sets of SMTP can be configured. Each set includes SMTP Server, Account Name, Password and E-mail Address settings. For SMTP server, contact your network service provider for more specific information.

2.2.6 FTP

The FTP setting can be found under this path: **System> FTP**.

The Administrator can set as sending alarm message to a specific File Transfer Protocol (FTP) site when an alarm is triggered. Users can assign alarm message to up to two FTP sites. Enter the FTP details, which include server, server port, user name, password and remote folder, in the fields.

Click on <Save> when finished.

2.2.7 HTTP

The HTTP setting can be found under this path: **System> HTTP**.

A HTTP Notification server can listen for notification messages from IP Cameras by triggered events. Enter the HTTP details, which include server name (for instance, http://192.168.0.1/admin.php), user name, and password in the fields. <Alarm> triggered and <Motion Detection> notifications can be sent to the specified HTTP server.
Click on <Save> when finished.

Please refer to: Application> Send HTTP notification/ Motion Detection for HTTP Notification settings.

2.2.8 Application (Alarm Settings)

The Application setting can be found under this path: **System> Application**.

The Camera equips four alarm inputs and two relay outputs for cooperating with alarm system to catch events' images. Please refer to User's Manual for Alarm Pin Definition to connect the alarm devices.

Alarm Pin Selection

Select an alarm pin which is to be configured from the <Alarm Pin Selection> field. Then click on the button <Edit> below the field to carry on alarm programming.

Alarm Status Settings

The specific alarm pin's property can be programmed in this section.

Alarm Setting

- **Alarm Switch**
  The Administrator can enable or disable the alarm function.

- **Alarm Type**
  Select an alarm type, <Normal close> or <Normal open>, that corresponds with the alarm application.

Triggered Action (Multi-option)

The Administrator can specify alarm actions that will take at an alarm occurrence. All options are listed as follows:

- **Enable Alarm Output 1/2**
  Select these items to enable alarm relay outputs.

- **Send Message by FTP/E-Mail**
  The Administrator can select whether to send an alarm message by FTP and/or E-Mail when an alarm is triggered.

- **Upload Image by FTP**
  Select this item and the Administrator can assign a FTP site and configure various parameters. When the alarm is triggered, event images will be uploaded to the appointed FTP site.

- **Upload Image by E-Mail**
  Select this item and the Administrator can assign an e-mail address and configure various parameters. When the alarm is triggered, event images will be sent to the appointed e-mail address.

NOTE: Make sure SMTP or FTP configuration has been completed. Please refer to section Mail and FTP for further details.

- **PTZ Function**
  Assign a camera function: Preset, Sequence, Autopan or Cruise, and specify a Preset Point/Sequence Line/Autopan Path/Cruise Line for the camera to perform at an alarm occurrence.

NOTE: Please refer to the sections through Preset to Sequence for details of Preset Point / Cruise Line / Autopan Path / Sequence Line setups.

If the selected function is <Preset>, it is required to enter its dwell time (1 ~ 256 sec.) in the corresponding field as shown below. When the alarm is triggered, the camera will go to the selected Preset Point and stay there for a user-defined period of time. As for other function modes, the camera will keep executing the specified function; to stop the performance, simply change the camera's status.

NOTE: The dwell time is only adjustable when selecting **Preset** as the alarm action. When the dwell time is up, the Camera will go back to its trigger position and recheck alarm pin status.

- **Send HTTP notification**
  Check this item, select the destination HTTP address, and specify the parameters for event notifications by <Alarm> triggered. When an alarm is triggered, the notification can be sent to the specified HTTP server.

For instance, if the custom parameter is set as" action=1&group=2", and the HTTP server name is" http://192.168.0.1/admin.php", the notification will be

sent to HTTP server as" http://192.168.0.1/admin.php? action=1&group=2" when alarm is triggered.

- **Record Stream to SD Card**
  Select the item and the alarm-triggered recording will be saved into your Micro SD card.

  Pre-trigger buffer recording function allows users to check what happened to cause the trigger. The pre-trigger buffer time range is from 1 to 3 seconds.

  Select <Upload for __ sec> to set the recording duration after alarm is triggered. The setting range is from 1 to 99999 seconds.

  Select <Upload during the trigger active> to record the triggered video until the trigger is off.

  NOTE: Please make sure the local recording (with Micro SD/ SDHC card) is activated so that this function can be implemented. Refer to Recording for further details.

File Name

Enter a file name in the File name field, ex. image.jpg. The uploaded image's file name format can be set in this section. Please select the one that meets your requirements.

- **Add date/time suffix**
  File name: imageYYMMDD_HHNNSS_XX.jpg
  Y: Year, M: Month, D: Day
  H: Hour, N: Minute, S: Second
  X: Sequence Number

- **Add sequence number suffix (no maximum value)**
  File name: imageXXXXXXX.jpg
  X: Sequence Number

- **Add sequence number suffix (limited value)**
  File Name: imageXX.jpg
  X: Sequence Number

  The file name suffix will end at the number being set. For example, if the setting is up to “10,” the file name will start from 00, end at 10, and then start all over again.

- **Overwrite**
  The original image in the FTP site will be overwritten by the new uploaded file with a static filename.

Save

After complete all the settings mentions above, please click on the <Save> button to save all the settings on this page.

2.2.9 Motion Detection

The Motion Detection setting can be found under this path: **System> Motion Detection**.

Motion Detection function allows detecting suspicious motion and triggering alarms when motion volume in the detected area reaches/exceeds the determined sensitivity threshold value.

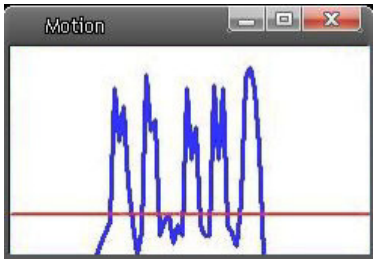
In the Motion Detection setting page, there is a frame (**Motion Detection Window**) displayed on the Live Video Pane. The Motion Detection Window is for defining the motion detection area. To change the size of the Motion Detection Window, move the mouse cursor to the edge of the frame and draw it outward/inward. Moving the mouse to the center of the frame can shift the frame to the intended location.

Up 10 Motion Detection Windows can be set. Click on the <add> button under the Live Video Pane to add a Motion Detection Window. To cancel a Motion

Detection Window, move the mouse cursor to the selected Window, and click on the <delete> button.

If Motion Detection function is activated, the pop-out window (Motion) with indication of motion will be shown.

When motion is detected, the signals will be displayed on the Motion window as shown below.



Motion Detection

Users are able to turn on/off Motion Detection. Default setting is Off.

Motion Detection Setting

Users could adjust various parameters of Motion Detection in this section.

- **Sampling pixel interval [1-10]:**
  The default value is 1, which means system will take one sampling pixel for every pixel.

- **Detection level [1-100]:**
  The default level is 10. The item is to set detection level for each sampling pixel; the smaller the value, the more sensitive for each sampling pixel.

- **Sensitivity level [1-100]:**
  The default level is 80, which means if 20% or more sampling pixels are detected differently, system will detect motion. The bigger the value, the more sensitive it is. Meanwhile, when the value is bigger, the red horizontal line in the motion indication window will be lower accordingly.

- **Time interval (sec) [0-7200]:**
  The default interval is 10. The value is the interval between each detected motion.

Triggered Action (Multi-option)
The Administrator can specify alarm actions that will take when motion is detected. All options are listed as follows:

- **Enable Alarm Output 1/2**
  Check the item and select the predefined type of alarm output to enable alarm relay output when motion is detected.

- **Send Alarm Message by FTP/E-Mail**
  The Administrator can select whether to send an alarm message by FTP and/or E-Mail when motion is detected.

- **Upload Image by FTP**
  Select this item and the Administrator can assign a FTP site and configure various parameters. When motion is detected, event images will be uploaded to the appointed FTP site.

- **Upload Image by E-Mail**
  Select this item and the Administrator can assign an e-mail address and configure various parameters. When motion is detected, event images will be sent to the appointed e-mail address.

  NOTE: Make sure SMTP or FTP configuration has been completed. Refer to Mail and FTP for further details.

- **Send HTTP notification**
  Check this item, select the destination HTTP address, and specify the parameters for event notifications by <Motion Detection> triggered. When an alarm is triggered, the notification can be sent to the specified HTTP server.

For instance, if the custom parameter is set as" action=1&group=2", and the HTTP server name is" http://192.168.0.1/admin.php", the notification will be sent to HTTP server as" http://192.168.0.1/admin.php? action=1&group=2" when alarm is triggered.

- **Record stream to SD Card**
  Select this item and the Motion Detection recording will be stored in Micro SD/ SDHC card when motion is detected.

NOTE: Please make sure the local recording (with Micro SD/ SDHC card) is activated so that this function can be implemented. Refer to Recording for further details.

File Name

The uploaded image's filename format can be set in this section. Please select the one that meets your requirements.

Save

Click on the <Save> button to save all the Motion Detection settings mentioned above.

2.2.10 Tampering

The Tampering setting can be found under this path: **System> Tampering**.

Tempering Alarm function helps the IP Camera against tampering such as deliberate redirection, blocking, paint spray, and lens cover, etc through video analysis and reaction to such events by sending out notifications or uploading snapshots to the specified destination(s).

Detection of camera tampering is achieved by measuring the differences between the older frames of video (which are stored in buffers) and more recent frames.

Tampering Alarm

Users are able to turn on/off Tampering Alarm function in Tampering Alarm setting page. The default setting is Off.

Tampering Duration

Minimum Tampering Duration is the time for video analysis to determine whether camera tampering has occurred. Minimum Duration could also be interpreted as defining the Tampering threshold; longer duration represents higher threshold. Settable Tampering Duration time range is from 10 to 3600 seconds.

Triggered Action (Multi-option)

The Administrator can specify alarm actions that will take when tampering is detected. All options are listed as follows:

- **Enable Alarm Output 1/2**
  Check the items and select the predefined type of alarm output to enable alarm relay outputs when tampering is detected.

- **Record stream to SD Card**
  Select this item and the Tampering Alarm recording will be stored in Micro SD/ SDHC card when tampering is detected.

  NOTE: Please make sure the local recording (with Micro SD/ SDHC card) is activated so that this function can be implemented. Refer to Recording for further details.

- **Send Alarm Message by FTP/E-Mail**
  The Administrator can select whether to send an alarm message by FTP and/or E-Mail when tampering is detected.

- **Upload Image by FTP**
  Select this item and the Administrator can assign a FTP site and configure various parameters. When tampering is detected, event images will be uploaded to the appointed FTP site.

- **Upload Image by E-Mail**
  Select this item and the Administrator can assign an e-mail address and configure various parameters. When tampering is detected, event images will be sent to the appointed e-mail address.

  NOTE: Make sure SMTP or FTP configuration has been completed. Refer to Mail and FTP for further details.

- **Send HTTP notification**

  Check this item, select the destination HTTP address, and specify the parameters for HTTP notifications. When the Tampering Alarm is triggered, the HTTP notifications can be sent to the specified HTTP server.

  For instance, if the custom parameter is set as" action=1&group=2", and the HTTP server name is" http://192.168.0.1/admin.php", the notification will be sent to HTTP server as" http://192.168.0.1/admin.php? action=1&group=2" when alarm is triggered.

File Name

The uploaded image's filename format can be set in this section. Please select the one that meets your requirements.

Save

Click on the <Save> button to save all the Tampering Alarm settings mentioned above.

2.2.11 Storage Management (Local Recording)

The Storage Management setting can be found under this path: **System> Storage Management**.

Users can implement local recording to the Micro SD/SDHC card up to 32GB. This page shows the capacity information of the Micro SD card and a recording list with all the recording files saved on the memory card. Users can also format the SD card and implement automatic recording cleanup through the setting page.

To implement Micro SD card recording, please go to the <Recording> page (refer to the section Recording) for activation.

NOTE: Please format the Micro SD/SDHC card when using for the first time. Formatting will also be required when a memory card already being used on one camera and later transferred to another camera with different software platform.

Device information

When users insert the Micro SD/SDHC card, the card information such as the memory capacity and status will be shown at Device Information section.

When the memory card is successfully installed, the memory card status shall be shown at <Device information> section in the Storage Management page.

Device setting

Click on the <Format> button to format the memory card.

Disk cleanup setting

Users can enable automatic recordings cleanup by specifying the time and storage limits.

Recording List

Each video file on the Micro SD/SDHC card will be listed in the Recording list. The maximum file size is 60 MB/per file.

When the recording mode is set as <Always> (consecutive recording) and the Micro SD/ SDHC card recording is also allowed to be enabled by events triggered, once events occur, the system will immediately implement events recording to the memory card. Then the IP Camera will return to the regular recording mode after events recording.

- **Remove**
  To remove a file, select the file first, and then click on the <Remove> button.

- **Sort**
  Click on the <Sort> button, and the files in the Recording list will be listed in name and date order.

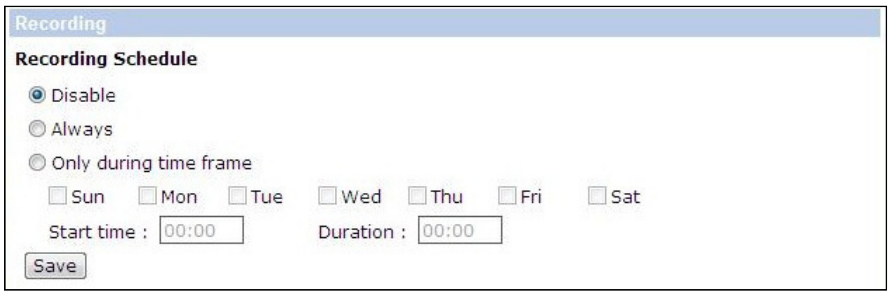
  NOTE: The capital letter A/M/R appears in the very beginning of name denotes the sort of the recording: A stands for Alarm; M stands for Motion; R stands for regular recording.

- **Download**
  To open/download a video clip, select the file first, and then click on the <download> button below the Recording list field. The selected file window will pop up. Click on the AVI file to directly play the video in the player or download it to a specified location.

2.2.12 Recording (Local Recording)

The Recording setting can be found under this path: **System> Recording**.

In the Recording setting page, users can specify the recording schedule that fits the present surveillance requirement.



Activating Micro SD/SDHC Card Recording

Two types of schedule mode are offered: Always and Time Frame setting. Users can setup the time frame to fit the recording schedule or choose <Always> to activate Micro SD/SDHC Card Recording all the time.

Please click on the <Save> button for confirming the schedule mode.

Terminating Micro SD/SDHC Card Recording

Select <Disable> to terminate the recording function.

2.2.13 File Location (Snapshots and Web Recording)

The Snapshot setting can be found under this path: **System> Snapshot**.

Users can specify a storage location on the PC or in the hard drive for the snapshots and live video recording. The default setting is: C:\. Once confirm the setting, click on <Save>, and all the snapshots and web recording will be saved in the designate location.

NOTE: Make sure the selected file path contains valid characters such as letters and numbers.

NOTE: For users with Windows 7 operating system, it is required to log on as an Administrator to implement the Snapshot and Web Recording function.

2.2.14 View Log File

The View Log File function can be found under this path: **System> View Log File**.

Click on the link to view the system log file. The content of the file provides useful information about configuration and connections after system boot-up.

2.2.15 View User Information

The View User Information function can be found under this path: **System> View User Information**.

The Administrator can view each added user's login information and privileges (refer to the section Security).

View User Login Information

All the users in the network will be listed in the <User information> zone, as "**User: 4321**." It indicates that one user's login username is "User", and password is "4321".

View User Privilege

Click on <get user privacy> at the bottom of the page, and the Administrator can view each user's privileges as "**User: 1:1:0:1**."

1:1:0:1= I/O access : Camera control : Talk : Listen (refer to the section Security)

Therefore, it denotes the user is granted privileges of I/O access, Camera control and Listen.

2.2.16 View Parameters

The View Parameters function can be found under this path: **System> View Parameter.**

Click on this item to view the entire system's parameter setting.

2.2.17 Factory Default

The Factory Default setting can be found under this path: **System> Factory Default**.

Users can follow the instructions on this page to reset the IP Camera to factory default settings if needed.

Set Default

Click on the <Set Default> button to recall the factory default settings. Then the system will restart in 30 seconds.

NOTE: The IP address will be restored to default.

Reboot

Click on the <Reboot> button, and the system will restart without changing current settings.

2.2.18 Software Version

The Software Version can be found under this path: **System> Software Version**.

The current software version is displayed in the software version page.

2.2.19 Software Upgrade

The Software Upgrade setting can be found under this path: **System> Software Upgrade**.

NOTE: Make sure the upgrade software file is available before carrying out software upgrade.

The procedure of software upgrade is as below:

Step 1: Click on <Browse> and select the binary file to be uploaded, ex. userland.img.

NOTE: Do not change the upgrade file name, or the system will fail to find the file.

Step 2: Pull down the upgrade binary file list and select the file you want to upgrade; in this case, select “userland.img.”

Step 3: Click on the <Upgrade> button. The system will check whether the upgrade file exists or not, and then begin to upload the upgrade file. Subsequently, the upgrade status bar will be displayed on the page. When it runs to 100%, the upgrade process is finished.

After the upgrade process is finished, the viewer will return to Home page.

Step 4: Close the video browser.

Step 5: Go to <Start>, activate <Control Panel>, and then double click on <Add or Remove Programs>. In the <Currently install programs> list, select ,<DCViewer> and click on the button <Remove> to uninstall the existing DC Viewer.

Step 6: Open a new web browser, re-login the IP Camera, and then allow the automatic download of DC Viewer.

2.2.20 Maintenance

The Maintenance setting can be found under this path: **System> Maintenance**.

Users can export configuration files to a specified location and retrieve data by uploading an existing configuration file to the IP Camera.

Export

Users can save the system settings by exporting the configuration file (.bin) to a specified location for future use. Click on the <Export> button, and the popup File Download window will come out. Click on <Save> and specify a desired location for saving the configuration file.

Upload

To copy an existing configuration file to the IP Camera, please click on <Browse> to select the configuration file first, and then click on the <Upload> button for uploading.

2.3 Streaming

Under the tab **<Streaming>**, there are categories including: <Video Format>, <Video Compression>, <Video OCX Protocol>, <Video Frame Rate>, and <Audio>.

In Streaming, the Administrator can configure specific video resolution, video compression mode, video protocol, audio transmission mode, etc. Further details of these settings will be specified in the following sections.

2.3.1 Video Format (Video Resolution/ Video Deinterlace)

The Video Format setting can be found under this path: **Streaming> Video Format**.

Video Format

Under Video Resolution section, the available video resolution formats are including MJPEG and H.264. Please refer to the User's Manual for more combination details.

Click on <Save> to confirm the setting.

Text Overlay Settings

Users can select the items to display data including date/time/text on the live video pane. The maximum length of the string is 20 alphanumeric characters.

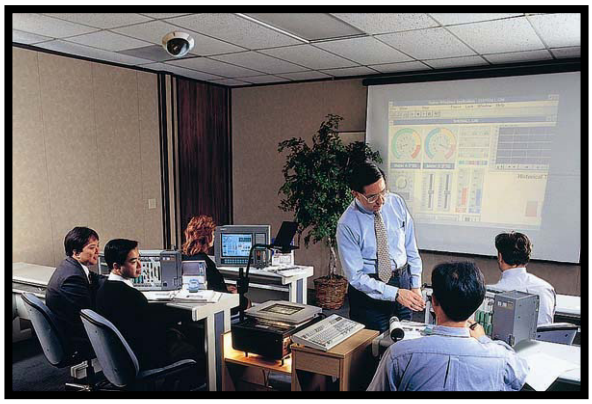
Click on <Save> to confirm the Text Overlay setting.

Video Rotate Type

Users can change video display type if necessary. Selectable video rotate types include Normal, Flip, Mirror, 90 degree clockwise, 180 degree rotate and 90 degree counterclockwise. Differences among these types are illustrated as below.

Suppose the displayed image of the IP Camera is shown as the figure below.

To rotate the image, users can select <Flip>, for instance. Then the displayed image will be reversed as shown below.



The following is descriptions for different video rotate type.

- **Flip**
  If select <Flip>, the image will be rotated vertically.

- **Mirror**
  If select <Mirror>, the image will be rotated horizontally.

- **90 Degree Counter-/clockwise**
  Selecting <90 Degree Counter-/clockwise> will make the image 90° counter-/clockwise inversed.

- **180 Degree Rotate**
  Selecting <180 Degree> will make the image 180°inversed.

Click on <Save> to confirm the setting.

GOV Settings

Users can set the GOV length to determine the frame structure (I-frames and P-frames) in a video stream for saving bandwidth. Longer GOV means decreasing the frequency of I-frames. Click <Save> to confirm the GOV setting.

2.3.2 Video Compression

The Video Compression setting can be found under this path: **Streaming> Video Compression**.

Users can select a proper MJPEG/H.264 compression mode on the video compression page, depending on the application.

MJPEG Q (Quality) factor

Higher value implies higher bit rates and higher visual quality. The default setting of MJPEG Q factor is 35; the setting range is from 1 to 70.

H.264-1/ H.264-2 bit rate

The default setting of H.264-1/ H.264-2 is 4096/1024 kbps; the setting range is from 64 to 8192 kbps.

Display Compression Information

Users can also decide whether to display compression information on the Home page.

CBR Mode Setting

The CBR (Constant Bit Rate) mode could be the preferred bit rage mode if the bandwidth available is limited. It is important to take account of image quality while choosing to use CBR mode.

Click on <Save> to confirm the setting.

2.3.3 Video OCX Protocol

The Video OCX Protocol setting can be found under this path: **Streaming> Video OCX Protocol**.

In the Video OCX protocol setting page, users can select RTP over UDP, RTP over TCP, RTSP over HTTP or MJPEG over HTTP, for streaming media over the network. In the case of multicast networking, users can select the Multicast mode.

Video OCX protocol setting options include:

- **RTP over UDP/ RTP over RTSP(TCP)/ RTSP over HTTP/ MJPEG over HTTP**
  Select a mode according to your data delivery requirements.

- **Multicast Mode**
  Enter all required data, including <multicast IP address>, <H.264 video port>, <MJPEG video port>, <Audio Port> and <TTL> into each blank.

Click on <Save> to confirm the setting.

2.3.4 Video Frame Rate

The Video Frame Rate setting can be found under this path: **Streaming> Video Frame Rate**.

Video frame rate is for setting the frames per second (fps) if necessary.

MJPEG/ H.264-1/ H.264-2 Frame Rate

The default setting of MJPEG Frame Rate is 30 fps; the setting range is from 1 to 30.

Click on <Save> to confirm the setting.

NOTE: Lower frame rate will decrease video smoothness.

2.3.5 Video Mask

The Video Mask setting can be found under this path: **Streaming> Video Mask**.

Active Mask Function

- **Add a Mask**
  Check a Video Mask checkbox, and a red frame will come out in the Live Video pane at the right side. Use the mouse to drag and drop to adjust the mask's size and place it on the target zone.

  NOTE: It is suggested to set the Video Mask twice bigger than the object.

- **Cancel a Mask**
  Uncheck the checkbox of the Video Mask meant to be deleted, and the selected mask will disappear from the Live Video pane instantly.

Mask Setting

- **Mask color**
  The selections of Mask color include red, black, white, yellow, green, blue, cyan, and magenta. Click <Save> to confirm the setting.

2.3.6 Audio (Audio Mode and Bit Rate Settings)

The Audio Mode setting can be found under this path: **Streaming> Audio**.

In the Audio page, the Administrator can select one transmission mode and audio bit rate.

Transmission Mode

- **Full-duplex (Talk and Listen simultaneously)**
  In the Full-duplex mode, the local and remote sites can communicate with each other simultaneously, i.e. both sites can speak and be heard at the same time.

- **Half-duplex (Talk or Listen, not at the same time)**
  In the Half-duplex mode, the local/remote site can only talk or listen to the other site at a time.

- **Simplex (Talk only)**
  In the Talk only Simplex mode, the local/remote site can only talk to the other site.

- **Simplex (Listen only)**
  In the Listen only Simplex mode, the local/remote site can only listen to the other site.

- **Disable**
  Select the item to turn off the audio transmission function.

Server Gain Setting

Set the audio input/output gain levels for sound amplification. The audio gain values are adjustable from 1 to 6. The sound will be turned off if the audio gain is set to “Mute”.

Bit Rate

Selectable audio transmission bit rate include 16 kbps (G.726), 24 kbps (G.726), 32 kbps (G.726), 40 kbps (G.726), uLAW (G.711) and ALAW (G.711). Both uLAW and ALAW signify 64 kbps but in different compression formats. Higher bit rate will let higher audio quality and require bigger bandwidth.

Click on <Save> to confirm the setting.

2.4 PTZ

Under the tab **<PTZ>**, there are categories including: <Preset>, <Cruise>, <Auto Pan>, <Sequence>, <Home>, <Tilt Range>, <Camera- Exposure>, <Camera- WB>, <Camera- Misc1>, <Camera- Misc2>, and <Camera- Default>.

2.4.1 Preset

The Preset Programming can be found under this path: **PTZ> Preset**.

Totally 256 Preset Points can be programmed for the IP Camera. Please refer to the instructions below to set a Preset Point.

Preset Setting

To setup a Preset Point, please first move the cursor to the live view pane. Then left click and drag the red pointer with PTZ controls to a desired position and adjust the fine zoom/ focus ratio. Subsequently, assign a number for the current position from the drop-down Number List (click on <PrePage> or <NextPage> button to reach number 1 to 256), and enter its descriptive name. Click on the button <Set> to save the settings mentioned above.

Preset Go

To have the camera move to a specified Preset position, please select the Preset Point from the drop-down Preset list (click on <PrePage> or <NextPage> button to reach preset number 1 to 256). Then the camera shall readily move to the target position.

2.4.2 Cruise

The Cruise Programming can be found under this path: **PTZ> Cruise**.

The IP Camera supports up to eight Cruise Paths. Please follow the instructions below for Cruise Path setup.

Cruise Setting

To setup a Cruise Path, please first select a path number from the drop-down list. Then move the cursor to the live view pane, and move the camera to a desired view (PTZ controls) as the start point of a Cruise Path. Click on the <Set> button of <Record Start> and start programming the Cruise Path via PTZ controls.

When finishing programming, click on the <Set> button of <Record End> to quit. Then this Cruise Path will be automatically recorded.

Cruise Run

Select the specified Cruise Path from the drop-down list, click on the <Run> button, and then the camera will start touring around as recorded.

To view the camera touring around in full screen mode, please move the cursor onto the live view pane, right-click and left-click to select “fullscreen”. Then users can view the camera navigation in full screen.

To stop running a Cruise Path, simply move the cursor to the live view pane and move the camera in any direction.

2.4.3 Auto Pan

The Auto Pan Programming can be found under this path: **PTZ> Auto Pan**.

The IP Camera supports four Auto Pan Paths. Please refer to the instructions below to set an Auto Pan Path.

Auto Pan Setting

To setup an Auto Pan Path, please select a path number from the drop-down list first. Then move the cursor to the live view pane, and move the camera to a desired view as the Start Point of an Auto Pan Path. Click on the <Set> button of the <Start Point> and the current view will be automatically saved as the start point of the Auto Pan Path.

NOTE: The room ratio of an Auto Pan’s Start Point will persist throughout the whole path.

Enter the speed ratio into the Speed field; the speed ratio ranges from 0 (low) to 3 (fast). Then choose to run the Auto Pan Path in right/left direction from the Direction drop-down list.

Move the camera to another desired position as the end point of the Auto Pan Path. Click on the <Set> button of the <End Point> for saving the setting.

Auto Pan Run

Select the specified Auto Pan Path from the drop-down list, click on the <Run> button, and then the camera will start moving horizontally as recorded.

To view the camera panning in full screen mode, please move the cursor onto the live view pane, right-click and left-click to select “fullscreen”. Then users can view the camera navigation in full screen.

To stop running an Auto Pan Path, simply move the cursor to the live view pane and move the camera in any direction.

2.4.4 Sequence

The Sequence Line Programming can be found under this path: **PTZ> Sequence**.

The IP Camera supports totally eight Sequence Lines; each Sequence Line consists of up to 64 Preset Points. Please refer to the instructions below to program a Sequence Line.

NOTE: Before setting this function, users must pre-define at least two Preset Points.

Sequence Setting

Please click on the <Edit> button in <Sequence Setting> section to enter the Sequence setting menu.

- **Sequence Line**
  Please select the number of Sequence Line to be set from the drop-down list in the top of the Sequence setting menu.

- **Sequential Preset Points Setting**
  Please setup each Preset Point of the programmed Sequence Line in order, assigning a Preset Point from the <Name> list for the specified number of Preset Point (click <Pre Page> or <Next Page> button to reach preset point 1 to 256) and entering both Dwell Time (0~255) and Speed (0~14) into the corresponding fields.

When finishing the sequential Preset Points setting, please click on the button <Save> in the top of the Sequence setting menu.

Sequence Run

Select the specified Sequence Line from the drop-down list, click on the <Go> button, and then the camera will start moving forward each scene sequentially as programmed.

To view the camera executing a Sequence Line in full screen mode, please move the cursor onto the live view pane, right-click and left-click to select “fullscreen”. Then users can view the camera navigation in full screen.

To stop running the Sequence Line, simply move the cursor to the live view pane and move the camera in any direction.

2.4.5 Home

The Home Function can be found under this path: **PTZ> Home**.

Users are able to set an operation mode to ensure constant monitoring. If the IP Camera idles for a period of time, the selected function will be activated automatically; this is the HOME function. The HOME function allows constant and accurate monitoring to avoid the Dome Camera idling or missing events.

Home Setting

- **Activate/Disable Home Function**
  Select <On> or <Off> to activate or disable the Home function. Then click on the <Set> button to save the setting.

- **Time**
  The time here represents the duration of camera idle time previous to running a Preset Point/Cruise Line/Auto Pan Path/Sequence Line. When the Home function is activated, the Dome Camera will start to count down when it idles, and then execute the predefined action as time expires. The time period ranges from 1 to 128 minutes; please specify it in the field.

- **Action Type**
  Please select a Home action type (Preset Point/Cruise Line/Auto Pan Path/Sequence Line) and specify the number of Preset Point/Cruise Line/Auto Pan Path/Sequence Line from the drop-down <Type> and <Line> lists. Click on the button <Set> to save the Home settings.

2.4.6 Tilt Range

The Tilt Range Setting can be found under this path: **PTZ> Tilt Range**.

The IP Camera's tilt angle is adjustable from minimum -10° to maximum 190°. Please enter the desired minimum and maximum tilt angle into the corresponding fields respectively. Click on the <Set> button to save the tilt angle settings.

2.4.7 Camera— Exposure

The Exposure Setting can be found under this path: **PTZ> Camera- Exposure**.

In the Exposure Mode setting page, users can select either the <Full Auto> mode or adjust the parameter of the Shutter/Iris/Bright Priority mode for optimized video output in accordance with the operating environment.

Shutter Priority Mode

In this mode, it is shutter speed that takes main control of exposure. The range of shutter speed is from 1/10000 to 1.

Iris Priority Mode

In this mode, it is iris that has premier priority in control of exposure. The value of iris is adjustable from F1.6 to F28.

Manual Mode

In this mode, users can change the Shutter speed (1/10000 to 1), Iris (F1.6 to F28), and Gain (1 to 15) manually.

2.4.8 Camera—WB (White Balance)

The White Balance Setting can be found under this path: **PTZ> Camera- WB**.

A camera needs to find reference color temperature, which is a way of measuring the quality of a light source, for calculating all the other colors. The unit for measuring this ratio is in degree Kelvin (K). Users can select one of the White Balance Control modes according to the operating environment. The following table shows the color temperature of some light sources for reference.

Light Sources	Color Temperature in K
Cloudy Sky	6,000 to 8,000
Noon Sun and Clear Sky	6,500
Household Lighting	2,500 to 3,000
75-watt Bulb	2,820
Candle Flame	1,200 to 1,500

Auto Mode

The Auto Balance White mode is suitable for environment with light source having color temperature in the range roughly from 2700 to 7500K.

Indoor/outdoor Mode

Select for indoor or outdoor mode.

ATW Mode (Auto Tracing White Balance)

The Dome Camera takes out the signals in a screen in the range from 2500 K to 10000 K.

Manual Mode

In this mode, users can change the White Balance value manually via specifying R gain and B gain; the range of R/B gain is from 0 to 255.

2.4.9 Camera—Misc 1 (Miscellaneous Setups Menu 1)

The Miscellaneous Setting Menu 1 can be found under this path: **PTZ> Camera- Misc 1**.

In the Camera—Misc (Miscellaneous) Setups Menu 1, users can set various camera parameters including Backlight Compensation (BLC), Sharpness,

Exposures Compensation (ExpComp), Image Flip, Speed by Zoom and ICR function. Each setting is specified as follows:

BLC

Users can choose to activate or disable the BLC function. Click on the button <Set> to save the setting.

Sharpness

Increasing the sharpness level can make the image looked sharper; especially enhancing the object's edge. The Sharpness value is adjustable from 1 to 15. Click on the button <Set> to confirm the setting.

ExpComp

Users can define the value of Exposure Compensation; the value ranges from 1 to 15.

Flip

Users can track an object continuously when it passes through under the Dome Camera with setting Flip to Mechanical (M.E.) mode.

NOTE: Flip setting is manual-controlled only. If a Preset Position or a point for other function (ex. Sequence) is set in the position that can only be reached through FLIP motion, when Flip function is turned off, the position cannot be reached anymore.

NOTE: To make the Dome Camera tilt between a specific range, such as -10° to +100° or -10° ~ +190°, please go to the **Tilt Range setting page** to set the tilt angle range. Otherwise, the Dome Camera will tilt 90° as the default setting.

- **M.E. Mode**
  M.E. is a standard mechanical operation. As the Dome Camera tilts to the maximum angle, it will pan 180°, and then continue tilting to keep tracking objects.

Speed by Zoom

Enable this function to adjust the pan/tilt speed automatically by internal algorithm when zooming. The larger zoom ratio leads to the lower rotating speed. Click on <Set> button to save the setting.

ICR Function

With the IR cut filter, the camera can still catch clear image at night time or in low light conditions.

- **Auto**
  In the Auto mode, the internal circuit will automatically decide the occasion to remove the IR cut filter according to the image brightness level.

- **On**
  Select the item to remove the IR cut filter.

- **Off**
  Select the item to disable IR function.

2.4.10 Camera—Misc 2 (Miscellaneous Setups Menu 2)

The Miscellaneous Setting Menu 2 can be found under this path: **PTZ> Camera-Misc 2**.

In the Camera—Misc (Miscellaneous) Setups Menu 2, users can setup various functions such Wide Dynamic Range (WDR), Auto Calibration, 2D Noise Reduction (2DNR), and TV System.

WDR

The WDR function is especially effective in environment with extreme contrast. Click on <Set> button to save the setting.

Auto Calibration

With the Auto Calibration function, the IP Camera calibrates when the deviation of dome pivot is detected. Click on <Set> button to save the setting.

2DNR

With the 2D Noise Reduction function, the processor analyzes pixel by pixel and frame by frame to eliminate environmental noise signal so that the highest quality image can be produced even in low light conditions. Click on <Set> button to save the setting.

TV System

Select the video format that matches the present TV system. Click on <Set> button to save the setting.

2.4.11 Camera- Default

The Default Setting can be found under this path: **PTZ> Camera- Default**.

In the Camera Default page, users can set the camera back to factory default settings simply by clicking on the <Set Default> button.

2.5 Logout

Click on the tab <Logout> on the top of the page, and the login window will pop up. This enables login with another user name.

Appendix A: Install UPnP Components

Please follow the instructions below to install UPnP components.

Step 1: Go to <Start>, click on <Control Panel>, and then double click on <Add or Remove Programs>.

Step 2: Click on <Add/Remove Windows Components> in the Add or Remove Programs page.

Step 3: Select <Networking Services> from the Components list in Components Wizard window of the Windows, and then click <Details>.

Step 4: Select <UPnP User Interface> in the Networking Services' subcomponents list and then click on <OK>.

Step 5: Click on <Next> in the Windows Components Wizard page.

Step 6: Click on <Finish> to complete installation.